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ABSTRACT

This study describes the kindergarten to level 3 curriculum of a bilingual-bicultural education program at Nestor Elementary School in Imperial Beach, California, under E.S.E.A. Title VII. It discusses the specific program environment and classroom organization used to implement the curriculum. The curriculum is divided into four main strands: native language, second language, concept development, and cultural awareness. The two investigators were teachers working as a team integrating the four strands at each grade level (kindergarten to three) during the period 1969 to 1975. The program has among its major aims the development of coordinate bilingualism not only for the Spanish-speaking Mexican-American student but for his native English-speaking peer as well. The major conclusions reached in this study are: (1) a strong commitment to a maintenance philosophy of bilingual education approached in a team-teaching manner has created the environment for the Spanish language that allows coordinate bilingualism to develop; (2) the two separate language environments and models have encouraged students to use the languages independently of each other, thus producing a higher degree of bilingualism; (3) strong native language development has been shown to be the key to second language acquisition; and (4) Anglo students have become progressively more bilingual. (CFM)

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THE NESTOR SCHOOL BILINGUAL-BICULTURAL EDUCATION MODEL: NATIVE LANGUAGE STRAND, SECOND LANGUAGE STRAND, CONCEPT DEVELOPMENT STRAND, AND CULTURAL AWARENESS STRAND

A Thesis
Presented to the
Graduate Faculty of the
School of Human Behavior
United States International University

In Partial Fulfillment
of the Requirements for the Degree of
Master of Arts
in Social Science

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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by

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San Diego, 1975

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Chapter 1

INTRODUCTION

All ethnic minority groups in the United States do not necessarily have a "minority status" which places them outside the mainstream of American society. Most European minorities have assimilated into the socio-cultural milieu of the United States. With the Mexican-American, the second largest minority group in this country, this has not taken place. There are several reasons this has happened. The Mexican people were indigenous to the Southwest, but as Americans they were a conquered people. The homeland ties were never broken as with European immigrants whose homes were left far away and whose native culture was not as apparent in this country as the Indo-Hispanic culture. (U.S. Commission on Civil Rights, 1972:11).

Another reason for this "minority status" is that the Mexican-American group is one whose cultural distinction includes language and physical characteristics. In a country which espouses the dominance of the Anglo culture, the groups most apparently distinct from this have the greatest difficulty of assimilation. However, assimilation such as that experienced by European groups is no longer a goal for minorities such as the Mexican-American. The emphasis has

shifted to retaining each group's own cultural identity within the American society, a society from which they have been excluded from full participation. The educational institution has had a large stake in perpetuating this exclusion. As one of the major institutions it almost exclusively reflects the Anglo dominant culture. The result has been approximately a 40 percent dropout rate of Mexican students in the Southwestern states. (U.S. Commission on Civil Rights, 1972:28).

The first step toward alleviating this problem concentrated on language. (Andersson and Boyer, 1970:108). English as a second language programs were established and financial aid was given through federal and state funds. The rationale for the problem was the lack of competence in English. Since the dropout rate has not changed appreciably, it was obvious this was not the whole problem. The curriculum has remained relatively unchanged except for special English classes. It still reflected none of the culture and language of the Mexican-American:

> In spite of the rich bicultural history of the Southwest the schools offer little opportunity for Mexican-Americans to learn . . . of the substantial contributions of Indo-Hispanic culture to the historical development of the Southwest. (U.S. Commission on Civil Rights, 1972:31).

By their very nature these English as a second language programs often lowered the expectations and were negative in scope in that they were remedial and often segregated the minority groups for special help. (Labov, 1972:255).

Finally, with the community pressure and the help of a few legislators, the Bilingual Education Act under E.S.E.A. Title VII was passed in 1965 which made it possible to use the language and culture of the target groups in public school education.

As an outgrowth of many of the attempts to implement bilingual education, a model has been in the process of development at Nestor Elementary School, South Bay Union School District, Imperial Beach, California, under E.S.E.A., Title VII.

Because of the nature of the federally sponsored project and the importance of integrating the four major strands of the bilingual-bicultural process model, this study represents a composite of four complementary investigations. The rationale for this approach was based upon the unmet need of examining a bilingual education program holistically and emphasizing the importance of subjective measures in determining the effectiveness of such a program.

BACKGROUND OF THE STUDY

From a historical perspective, bilingual-bicultural education has never achieved its own goals and philosophies. Initially the Bilingual Education Act was passed to offer yet another approach to remediation for the non-English speaker. This whole compensatory attitude has not allowed the full benefits of bilingualism and biculturalism to be realized in the American educational system. Even as late

as 1973 when California passed its first Bilingual Education Act, the option left open to districts for submitting proposals for state funding included types of programs which could not possibly achieve the goals of bilingualism and biculturalism stated by most projects in these proposals. Some of these options are:

1. Transfer type: In the transfer type the dominant language of the non-English speaking students will be used as a medium of instruction only until the student achieves proficiency in English; then it is no longer included in the curriculum. Bilingualism cannot be achieved if one of the two languages is eventually dropped from the student's learning process. The development of biculturalism requires the interaction of both cultural groups. If the non-English language is phased out of the curriculum the English speaking student will have little opportunity for developing a second language and culture.

2. Monoliterate type: In the monoliterate type the dominant language of the non-English speaking student is used as a medium of instruction but literacy is developed only in English. A full level of bilingualism requires literacy in both languages. Because of the importance of the written word in a modern society and its reflection within the educational curriculum where most information is communicated in print, the language in which literacy is not developed loses the necessary status for developing bilingualism as one of its major avenues of communication is

eliminated.

3. Partial bilingual type: In the partial bilingual type only certain subjects are chosen to be taught in the non-English language, usually the language arts areas, leaving other conceptual subjects such as math and science taught only in English. Conceptual development in both languages in all areas is also necessary for full bilingualism.

4. Maintenance type: A maintenance bilingual program offers the best approach to achieving bilingualism and biculturalism, although few programs have developed such a comprehensive approach. The maintenance type of bilingual education is also an option found in the state guidelines for bilingual education. In this type of program both languages are equally distributed over all areas of the curriculum and maintained throughout the school experience.

In achieving bilingual-bicultural education the maintenance program has a preventive rather than a compensatory focus. It provides competency for all students in two languages, thus raising the prestige of the minority language. It also provides the opportunity for interaction of all students in more than one culture:

> If the purpose of a bilingual program is to make children bilingual, then the native language is never replaced, but continues as a viable channel for both learning and self expression. (Saville, 1972:331).

Most Spanish speaking Mexican-American students in monolingual and monocultural schools besides becoming

functionally illiterate in two languages also lose their own cultural identities and their ability to function in the dominant culture.

In the opinion of the investigators any of the previously described program types, except maintenance, are again an attempt at eventual acculturation and will not reverse the process of failure reflected in many statements such as that of Robinett (1971:48):

> The school's lack of success in providing for the special needs of the bilingual child may be reflected in the child's low marks, retention at a certain grade level, development of hostility toward the school, poor attendance and finally in his leaving school altogether.

PROBLEM

Mexican-Americans make up the second largest distinct minority group in the United States. Their language and cultural differences have been ignored by our educational institutions and have resulted in a 40 percent dropout rate by grade eight of Mexican-American students in the Southwest. (U.S. Commission on Civil Rights, 1972:28). Remedial English as a second language programs have not changed these statistics. Many programs have not had the funds and/or personnel to develop a program which pervades all areas of the curriculum; and as has been noted by Knowlton (1970), the use of the Spanish language in classrooms was not sufficient in itself to improve the education of Spanish speaking students, and a new curriculum must be

devised with cultural as well as language requirements. In order to achieve a quality education in a bilingual program, it is now time to define and document basic curriculum in several areas in order to continue from this point forward toward the sophistication of techniques for each area. There is the need to understand the process of curriculum development, instructional improvement, parent participation, supportive services, and evaluation so that it can be integrated into a comprehensive model.

Four Subproblems: Native Language Component

Because the background of experiences a child receives before he enters school provides him with a referent to the world around him and because the language he is most familiar with is an integral part of this referent, a strong case may be made for the use of this native language in his formal educational experiences. For years non-English speaking children have been taught English language skills as well as reading in the same way as their native English speaking counterparts, assuming the same level of background and proficiency with the English language.

English as a second language programs have fallen far short of dealing with the native Spanish speaking child. Research and literature indicate that children learn concepts more quickly and easily if these are first introduced in their native language. (Lambert and Peale, 1962; Saville and Troike, 1970; Nedler and Lindfors, 1971) This

competence in the native language has also aided the learning of a second language.

Native Spanish development still continues to suffer from the confusion of the goals and overall objectives of bilingual education. The native language component needs to be seen within a total program and its place within it clearly defined. Many environmental factors of a total program will greatly influence the progress and success of such a component--for example, the status of the Spanish language within the program, the expectation level of the staff, and the continuity of program throughout the educational experience.

An additional problem in the development of this strand has been the approach to Spanish reading. Many programs have merely adapted English methodologies without considering the particular linguistic properties of the Spanish language.

Four Subproblems: Second Language Component

No sequential second language program for a bilingual-bicultural curriculum has yet been developed for the elementary school student beginning in kindergarten. For years the educational structure has preferred the teaching of "foreign" languages over the development of bilingualism. Although the availability of foreign language classes has been on the increase, certain problems have arisen. A 1965-1966 survey of enrollments indicated that

less than seven percent of students studying a foreign language in secondary schools continued to a fourth year program. (Teague and Rutiman, 1971:67). Few students enrolled in foreign language classes for more than two years. (Donoghue, 1971:62).

Bruce Gaarder (1971:80) acknowledges that there is "no significant amount of second language learning in the present foreign language programs: in elementary, secondary, or university levels." One of the problems is the low expectations on the part of the teacher, which have not produced true bilingualism, and in effect have produced a very low level of competence in the non-native language teachers.

Another problem that has affected newly organized bilingual programs is the need to develop an organized and developmental instructional program. Bilingual instruction is a new field and much curriculum is yet needed. Many programs have concentrated most of their efforts into the development of the native language as their most immediate need, while the second language teaching has often been left to continue haphazardly. Instruction in both native language and second language requires highly developed and organized time blocks and lesson plans. Paul Streiff (1971:2) contends that:

> The basic educational problems with regard to bilingualism were almost wholly concerned with the organization of schools in bilingual areas. Relatively little effort was made toward increased understanding of the complex psycholinguistic and

sociolinguistic aspects of the phenomenon of second language acquisition.

Four Subproblems: Concept Development Component

The concept development strand in the bilingual education model is a necessary step in the development of bilingualism. Piaget (1959) and Taba (1966) show a significant relationship between language development and thought processes. As such, a development of coordinate bilingualism must go beyond literacy and verbalization to include conceptualization in both languages. Unfortunately, bilingual education all too often ceases with the process of first and second language learning. The listening, speaking, reading, and writing skills are achieved; but the critical area of thinking skills in the second language is short-changed. This conceptual band is key in producing a balance in the level of bilingualism. This does not, however, imply an indiscriminate use of both languages throughout the curriculum at all levels. Therefore this study will emphasize a precise model for the population of Mexican-American students in question.

An important consideration is their "minority status" which often includes economic, experiential, social, and sometimes language deprivation. These considerations are basic in deciding when the curriculum should introduce content in the second language if in fact skills in the first language are poor. This question is also basic to

the development of coordinate bilingualism, considering the fact that the target language, Spanish, is one of low social status. (Gaarder, 1970:2). If the learning experience is bombarded too soon with the majority language, will the target language have sufficient time and concentration to achieve status in the student's self-concept and in the total school-community self-concept? Up to this point documentation of bilingual models for this population has not shown a commitment to the goals of coordinate bilingualism, since a systematic concept development process has not been included.

Four Subproblems: Cultural Awareness Component

The emphasis in the United States has been centered around the Anglo dominant culture. As a result little has been done to teach an appreciation of other cultures. A non-English speaking child who enters school is immersed in an environment which is totally different from that which he has known up to this point. He is often made to feel that his language, costume, diet, and customs are not good and that he should forsake them in order to "fit in" and become successful.

The educational system's lack of success in providing for the special needs of the culturally different are reflected in high dropout rates, low levels of aspiration, and poor expectations by the system itself. The absence of a child's culture in the school curriculum has led to a poor

attitude toward his culture and himself. A cultural awareness strand allows children to become aware of the importance of cultural interaction which affects attitude changes that can promote social change.

PURPOSE OF THE STUDY

This study will describe the Readiness-Level 3 curriculum of a bilingual-bicultural education program within an effective model. The model of the Nestor bilingual-bicultural program will be described as to the specific program environment and classroom organization used to implement the curriculum. The community involvement desired to achieve the goals of the program will be explored as will the evaluation process used to assess the program. The total curriculum aspect of the model is divided into four main strands: native language, second language, concept development, and cultural awareness. Each strand will include examples of curriculum materials and the instructional strategies to achieve the objectives of each strand.

Scope of the Native Language Component

This study will document the elementary Spanish native language (Readiness-Level 3) curriculum of a bilingual-bicultural education program within an effective model.

The study will explore and present the rationale for developing Spanish as a native language. It will delve into

the kind of preparation and the types of skills a child acquires before he enters school--for example, his ability to listen, speak, and comprehend his native language. It will also go into specific reasons for developing and maintaining a child's native language and the role of language in his ability to problem solve and the development of his cognitive skills.

The study will present objectives and goals for the development of Spanish as a native language and will document the process and curriculum used to achieve these goals.

Scope of the Second Language Component

It is the purpose of this section to describe an effective curriculum model used in second language development in the elementary grades. This study will describe the second language program which is part of the bilingual-bicultural program at Nestor Elementary School, in Imperial Beach, California.

Scope of the Concept Development Component

This study will describe the process through which the curriculum of the concept development strand and its function within the total Nestor bilingual-bicultural model was developed. It will provide a description of goals within a total model, sequential skills development from grades kindergarten through three, rationale for the approach being used, and a description of the methodology and strategies

suggested to achieve the goals.

Scope of the Cultural Awareness Component

This study will describe the primary (Readiness--Level 3) curriculum of the Cultural Awareness Strand within an effective model. It will include a description of goals, a rationale for the approach being used, a description of the methodology, and the strategies suggested to achieve the goals. The study will document the process and the curriculum used in this strand.

SIGNIFICANCE OF THE STUDY

Bilingual education arose in the United States as an uncoordinated effort to improve the education of the Mexican-American student. There is little information on bilingual programs and curriculum that have shown success, and more specifically on maintenance bilingual programs. Although many of the general principles used in the Nestor bilingual-bicultural program have been applied with success in other programs, there still exists no precise curriculum framework or guide which encompasses a total, sequentially developmental program. Models have been defined but have not been related and integrated with a total curriculum. Up to now all documentation of programs for the Mexican-American student has reflected an abstract and mainly theoretical emphasis. The significance of this study is that it will place many of the theories of bilingual education into an integrated total curriculum for actual use in the classroom.

METHODS

The Nestor bilingual-bicultural program is a total integrated and sequential educational model for the elementary grades kindergarten through six.

The design of the study is based on a composite of four separate investigations of specific strands in a comprehensive bilingual-bicultural education program. The cooperative efforts of four people--Adela Nadeau, Ofelia Van Olst, Maria Barreda, and Vilma Counts--were incorporated to complete the study. It was deemed that each of the four people has a special knowledge of the program gained through the experience, cooperation, and participation in the Nestor School bilingual model, and that a joint effort could contribute more to an understanding of the total process than the description of the program by any one of the participants or an external evaluation. The rationale for this cooperative effort was that the social and behavioral factors involved in the implementation of the program (administrator-teacher-parent interactions) were as important as the empirical evidence used to determine the effectiveness to the federal sponsor of the program.

Each of the investigators were teachers working as a team integrating the four strands at each grade level (kindergarten to three) during the period 1969 to 1975. By documenting both their experience as participant observers, creating and field testing curricular materials, and providing leadership for instructional studies and staff development, the investigators compiled and presented their data in the tradition of a descriptive research design. The

data collected were based on federal evaluation reports; administrator, teacher, and parent interviews; and a series of planning/evaluation brain storming sessions during the six year period of the Nestor School project. In addition to presenting an overview of the comprehensive bilingual-bicultural education program, each of the investigators engaged in an indepth study of four educational strands. The Native Language Development Strand was researched and developed by Ofelia Van Olst. The Second Language Development strand was researched and developed by Vilma Counts. The Concept or Cognitive Development Strand was researched and developed by Adel Nadeau. The Cultural Awareness Strand was researched and developed by Maria Barreda.

The description of the total model includes program environment, classroom organization, community involvement, and evaluation.

The Nestor bilingual-bicultural education program has among its major aims the development of coordinate bilingualism not only for the Spanish speaking Mexican-American student but for his native English speaking peer as well. It is a maintenance program, and as such has certain basic assumptions.

As has been stated, this curriculum is geared toward the goal of producing a coordinate bilingual. In order to accomplish this goal, the following premises have been accepted:

1. Minimal interference of the two languages with each other implies no interchange of language by any one teacher in conversation or within any one lesson period.

2. Readiness and first levels of reading instruction in the native language have no simultaneous second language reading or writing.

3. Coordinate bilingualism includes conceptualization as well as literacy and verbalization. All content is developed [illegible]maintained in the native language, then gradually and systematically augmented to a 50-50 balance with the second language.

4. An instructional program should include instruction in the native language not for the purpose of merely transferring to the language and culture of the middle majority, but the native language and culture should be maintained, developed, and distinguished throughout the grades. (Fishman and Lovas, 1970).

5. The instructional program should be a tool not only for educational change but for social, economic, and political change as well. (Gaarder, 1965).

6. Language development is a systematic language learning process which goes from aural-oral to reading and writing: "Writing systems originated long after spoken language . . . for these reasons the spoken language is considered primary." (Finnocchiaro, 1965:7).

7. The development of Spanish reading for the native English speaker is a different process than Spanish reading for the native Spanish speaker.

Methods: Native Language

The native language strand will deal primarily with curriculum for the development of the Spanish language in the elementary grades and the reasons for establishing a firm basis in Spanish for the native Spanish speaker. It will describe only one strand of a total curriculum but will place that strand within the total model.

The development of English as a native language will not be the concern of this study, as it is a well developed and documented area in education. What is critically lacking is a coherent Spanish curriculum for the native Spanish speaking child.

This study will deal with the implementation of various strategies or approaches to achieving the language development objectives to be stated in the paper. Some of these strategies are: (a) team teaching, (b) individualized instruction, (c) cross-age tutors, (d) a center oriented classroom, (e) an inquiry approach to the development of critical thinking skills, (f) a phonetic approach to the learning of reading in Spanish, (g) small group learning, and (h) language experience reading. Each of these areas will be explained and developed as to their specific role in the general development of language for the native Spanish speaker. Specific sample lessons for the accomplishment of these objectives will be presented. Also, materials that have been found to be successful over the four year period of field testing will be described and specific ways

in which they may be used will be suggested.

Although a description of the formal evaluation will be included and types and results of tests cited, the major emphasis will be on describing effective ways for development and implementation of teacher-made behavioral objectives, procedures, and criterion reference testing.

Methods: Second Language

The strand treated in this part of the total research effort is second language. In this strand the prime objectives will be the description of the following as they developed within the bilingual-bicultural model at Nestor School: (a) the development of the second language program for Spanish as a second language as well as English as a second language, (b) the development of vocabulary, (c) the development of reading in the second language, (d) the development of writing skills for the second language, and (e) some of the activities used for the motivation of spontaneous speech. The goals for second language at each level (kindergarten through grade three) will be explained. Examples of lessons that were used in developing the curriculum second language instruction will be presented.

The study will explain the strategies used to promote an effective second language program. These are: (a) a team teaching situation and its effects on language models; (b) bilingual instructional aides as they affect pupil-teacher ratios and small group instruction; (c) pantomiming,

role playing, dramatizations which help to prevent translation, thus keeping the child's native language to a minimum during periods of second language instruction; (d) activity oriented centers as they affect motivation; (e) storytelling as it may affect audio-experience in a new sound system; (f) use of mechanical equipment, tape recorder, and Language Master; and (g) small group instruction. Each of these strategies will be described, and its effects on the philosophy of the program will be explained. The following techniques will be described as to their use within the program: modeling, evoking questions, reinforcement, correction of errors, and backward buildup. The time periods spent at each grade level in second language instruction will also be discussed.

Methods: Concept Development

The concept development strand encompasses the content areas of the curriculum such as science, math, and social studies as opposed to the language development of the language arts areas. This strand will be shown to permeate the total bilingual curriculum for the development of concepts in the second language, gradually increasing with each level.

Significant strategies for grouping, team teaching, and lesson presentation will be demonstrated in the form of second language reinforcement lessons to concepts presented in the native language or language alternation by day or

week in which children are placed in mixed groups. The concept is previewed in the native language, the lesson is in the language of the day for the mixed group, then the concept is reviewed as a second language lesson. This preview-review model as developed by Serafina Krear (1971) will be presented in graphic form.

The content areas of the curriculum as described above are initiated and continuously developed in the native language of the child. The major objectives of this strand, though, are to gradually and increasingly develop concepts in the second language from the beginning levels.

Strategies for learning will also be articulated; for example, the inquiry and process approaches in which learning takes place inductively and through the learning of basic cognitive skills to deal with information, rather than merely recalling it.

Sample objectives and activities will be presented in this area, not only to demonstrate these strategies, but to provide a guide for other teachers to develop lessons within a concept development strand.

The objectives and activities will be given for each grouping and learning situation. For example, in the preview-review model, each aspect--the preview, the lesson, and the review--will each have objectives and activities. Also, sample reinforcement activities for native language will be shown. The lessons will reflect all levels, from the oral readiness stages through the literate stages.

Finally, suggested materials will be presented in these content areas, but only as they are useful in providing certain strategies.

Methods: Cultural Awareness

The cultural awareness strand deals mainly with the Anglo dominant culture and the Mexican-American heritage and culture. It involves units of study mainly in the social studies area. The units of study will show the use of teachers, group interaction, cross-age tutors, and program presentations.

This study will explain the various strategies used in this strand. These strategies include team teaching, inquiry strategies, storytelling, individual and group research, language experience stories, role-playing, arts and crafts, and mixed group activities. The methodology of the study will present ways in which the cultural awareness strand is to be implemented. Commercial as well as teacher- and student-made materials which are appropriate and have been used in this strand will be presented. Each section of the methodology will explain and relate the cultural awareness strand to the entire program.

LIMITATIONS OF THE STUDY

Although each curriculum strand of the program has self-contained elements, the strength of the program is based on using the entire curriculum within the stated

environment.

The program described in this study encompasses the kindergarten through grade six sequence; nonetheless, the curriculum design of this study is focused for the primary levels (readiness through third level). It will deal specifically with curriculum developed at Nestor Elementary School which has a 50-50 balance between Spanish speaking Mexican-American students and English speaking non-Mexican-American students.

DEFINITION OF TERMS

Bilingual education: There are many definitions for bilingual education. For our purpose bilingual education will be defined as instruction in the native language of the child, to maintain, develop, and distinguish this language and culture while the child gradually learns the second language and culture. Each language maintains its integrity and remains distinct.

Concept development: cognitive learning of subject areas other than language.

Coordinate bilingual: an individual who has two separate language systems, usually learned under different conditions, which cause minimal interference with each other. (Saville and Troike, 1970:6).

Cultural awareness: development of knowledge and empathy for likenesses and differences in people, including costume, diet, customs, language, and values.

Curriculum framework: a basis of expectations and goals with strategies and sample objectives which provide a guide for basic instruction in several areas of study.

Criterion reference instruments: non-standardized items based on each teacher's individual curriculum, usually pre and post tested.

Inquiry approach: learning strategies in which learning takes place inductively through the use of basic cognitive skills to deal with information rather than merely recalling it.

Levels: Viewed in a vertical plane, levels would most closely parallel grades or developmental stages.

Model:

> . . . a model consists of a set of associated ideas and concepts more or less organized around a larger conception of what teaching ought to be like and how it ought to be viewed. (Nuthall, 1973:49).

Multicultural education: education which provides children with varied ethnic experiences and exposes them to the customs and feelings of many people.

Native language: a child's dominant language--language of the home.

Second language: a language learned subsequent to a speaker's native language, sometimes the language of the school or of the wider community. (Saville and Troike, 1970).

Strand: a sequential flow of skills and materials which develops through the levels of each subject area.

Target group: the group whose language and culture is distinct from the dominant culture.

Chapter 2

REVIEW OF THE LITERATURE

Historically, Mexican-Americans as a group have produced large numbers of nonachievers and underachievers who often have become noncontributing adults. As one of the largest minority groups, the total population of Spanish-speaking people in the United States numbered 6,700,000 in 1969. (Litsinger, 1973:35). In the Southwestern states the population of the Mexican-American is so concentrated that the students in some school districts often comprise the majority. Their numbers can therefore hardly be ignored.

As a group they have one of the highest dropout rates of any minority group in the United States. According to the 1968 survey made by the National Advisory Committee on Mexican-American Education:

> The average Mexican-American child in the Southwest drops out of school by the seventh year. In Texas 89% of the children with Spanish surnames drop out before completing high school.
>
> Along the Texas-Mexico border four out of five Mexican-American children fall two grades behind their Anglo classmates by the time they reach the fifth grade.
>
> Although Spanish surnamed students make up more than 14% of the public school population of California less than one-half of 1% of the college students enrolled in the seven campuses of the University of California are of this group. (U.S. Office of Education, 1968:1).

Certain educational practices through the years have

contributed to the lack of educational achievement for the Mexican-American student. The "no Spanish" rule in the classroom or on the school grounds "evolved from the lack of appreciation for the knowledge of a foreign language as well as the concern over a deficiency in English." (U.S. Commission on Civil Rights, 1972:14). Students have been prohibited and discouraged in the use of Spanish in and out of the classroom for years. The following statement of one board's policy exemplifies the "no Spanish" rule as it followed the Texas Penal Code, and was enclosed with a Superintendents' Questionnaire and mailed to the U.S. Commission on Civil Rights by a school district in Texas:

> Each teacher, principal, and superintendent employed in the free-schools of this state shall use the (English) language exclusively in the classroom and on the campuses in conducting the work of the school. The recitations and exercises of the school shall be conducted in the English language except where other provisions are made in compliance with school law. (U.S. Commission on Civil Rights, 1972:15).

In California the language problem has resulted in an inordinate number of Mexican-American children relegated to the ranks of the mentally retarded. One Mexican-American educator found the belief persisted

> . . . that a foreign home language is a handicap, that somehow children with Spanish as a mother tongue were doomed to failure--in fact, that they were, ipso facto, less than normally intelligent. (Sanchez, 1966:15).

Another educator found that:

> Spanish speaking Mexican-American children have been relegated to classes for the retarded simply because many teachers equate linguistic

> ability with intellectual ability. In California Mexican-Americans account for more than 40% of the so-called mentally retarded. (Ortego, as cited in U.S. Commission on Civil Rights, 1972:15).

The exclusion of Mexican-American history, heritage and folklore from the academic curricula is a different and more subtle exclusion than the "no Spanish" rule, but just as consequential. When school principals were asked by the U.S. Commission on Civil Rights whether their schools offered any special Mexican-American "units" in their social studies classes at both the elementary and secondary levels, only California showed more than 50 percent affirmative response in school districts of 10 percent or more Mexican-Americans. The Southwestern states averaged 46 percent in elementary schools and 47 percent in the secondary schools. Arizona responded with the lowest figure of 18 percent in the secondary schools. (U.S. Commission on Civil Rights, 1972:32).

As the educational structure reflects on these statistics and practices, consider the following statement, as it may present a case for educational reform:

> You speak of improving education for Mexican-Americans. Actually you have been doing an excellent job of educating us for the purposes you have in mind. You've been doing a good job of it. If you sent us to college, who would pick your tomatoes, wash your cars, and clean your houses? There's no problem in the way we are being educated, the only problem is that we don't want to be menial laborers any more. (Mitchell, 1973:36).

In January of 1968 the Bilingual Education Act (ESEA Title VII) was signed into law. Its primary concern was "to meet the needs of children whose dominant language

is other than English." (Andersson and Boyer, 1970:1).

> This Act ushered in a new educational era and helped stimulate significant changes in education. It has had a tremendous effect on state and local educational policies. Before its enactment, the majority of our 50 states had legislation making English the sole medium of instruction. Today, 13 states have legislation, either explicit or supportive, concerning bilingual-bicultural education. (Peña, 1975:71).

The Bilingual Education Act allowed institutions of higher education to respond to the call of preparing future teachers and/or re-educating experienced teachers to work in bilingual programs. Some institutions have been reluctant to accept their responsibility for the adequate preparation of bilingual teachers. Others are now offering degrees primarily at the master's level for the preparation of these teachers.

The way has not been an easy one for bilingual education. Attitudinal change has been a large problem. There have been many pitfalls, and there have been tremendous strides forward.

The steps taken by the 93rd Congress improved the status of bilingual education. It passed several amendments to ESEA and other programs administered by the U.S. Office of Education. The education amendments of 1974

> . . . made clear its intent that bilingual education programs funded under the Bilingual Education Act are to involve use of both English and the native language as mediums of instruction in the basic school curriculum and to include the study of the history and culture associated with the native language. This is designed to develop and reinforce the child's self-esteem and to foster

> a legitimate pride in both cultures. (National Education Association Government Relations, 1975:81).

Some of the deficiencies which became apparent to the Congress were the need for adequately trained bilingual teachers, teacher aides, administrators, and counselors. It felt that the teacher education system had failed in providing programs which would train such personnel. Congress also felt that this failure of the institutions of higher learning to provide such training was a big obstacle to the development of fully bilingual programs where they were needed.

As a result, the Act provides funds for pre- and inservice workshops, preparation of educational personnel, and the development of adequate education programs in institutions of higher learning.

> The Act also has as its objectives the identification of elements of a successful bilingual education program, an examination of current testing patterns and the projection of new and more suitable ones, the publication of research and development findings, the development of curriculum materials and teaching aids and the dissemination of bilingual-bicultural education techniques and methodologies for use by schools at their discretion.
>
> The 1974 Act provides for a wider range of state activities, especially in training, and includes authority to grant some funds to the state educational agencies for supportive and technical services. (National Education Association Government Relations, 1975:82).

As reflected in the previous statements, there is now much support for bilingual education. "It is axiomatic that the best medium for teaching a child is his mother tongue." (United Nations Education Scientific and Cultural Organization, 1953:11). Singer (1956:455) stated: "Research studies have indicated that one of the best

predictors of success in the national language is mastery of the mother tongue."

There is, however, a problem in the definition of "bilingual":

> The term "bilingual" as it appears in the research literature does not necessarily mean "fluent in two languages." Jensen, in reviewing literature on the effects of childhood bilingualism, points to problems in defining bilingualism. The "pseudo" bilingual, for example, is more familiar with one language than another, and does not use his second language in communication. The true or balanced bilingual masters both languages early and uses them with equal facility in appropriate domains. (Berney and Eisenberg, 1968: 2).

One of the most persistent problems to the development of bilingual education programs is the lack of a precise definition of bilingual education itself, that is, how two languages will be used within an educational program.

The following quote is an example of the broad definitions of bilingual education:

> . . . the concurrent use of two languages as a media of instruction for a child in a given school in any or all of the school curriculum except the actual study of the languages themselves. (U.S. Commission on Civil Rights, 1972:17).

Singer states that:

> Part of the controversy is related to the vagueness of the meaning of bilingualism, oversimplification of the factors involved in the acquisition and evaluation of a second language and the theoretical differences in the nature of the relationship between language and mental development. (Singer, 1956:445).

Singer, as well as others, reflect the importance of the immediate society's view of the second language and its political implications: "The socio-political conditions

under which a person acquires a foreign language will tend to affect his attitude toward both languages" (Singer, 1956: 445) and then continues, reflecting that "a person may become bilingual as a result of association, compulsion or necessity." (Singer, 1956:445).

> Tan has defined four types of bilingualism (a) social, a second language is learned because of the close association of two people; (b) political, the minotiry group is compelled to learn the language of the majority group where both groups live in the same political unit; (c) colonial, the conquered majority is compelled to learn the language of the conquerors who constitute a minority of the population; (d) cultural, a second language is needed in order to learn new ideas written in another language (Singer, 1956:445).

The United States has experienced all these four types of bilingualism.

> After a hiatus of more than half a century we are just now reentering the first stages of genuine bilingual education at public expense. We are just overcoming the deceptive and self-deluding view that teaching English as a second language is, in itself, all there is to bilingual education. We are just beginning to seriously ponder different curricular models of real bilingual education. (Fishman, 1970: 221).

> Experience has taught us that the pressure toward homogeneity has been superficial and counterproductive; that the spirit of ethnicity, now lying dormant in our national soul, begs for reawakening in a time of fundamental national need. (Pucinski, as cited in Gaarder, 1965:169).

This feeling has been expressed by many writers in exploring the American ethnic scene. Andersson and Boyer (1970), Boyer (1964), and Fishman (1966) strongly point out that nationalism and assimilation as pervading themes in American society have produced poverty and educational retardation, "the unplanned attrition of minority cultures." (Andersson and Boyer,

1970:85). These writers agree that there must be a planned and conscious program toward cultural pluralism. Many researchers are saying that the key factor in advancing cultural pluralism is language. As Mildred Boyer (1964:293) states:

> It is probably safe to say that, aside from race-related syndromes, the language-culture syndrome is the one single pattern that looms largest in the entire black picture of poverty in this nation.

The recent interest in bilingual education has clearly stemmed from a compensatory effort: that is, an effort to help the limited or non-English-speaking minority student bridge the gap to English and American middle-class values. However, during this trend many educators, linguists and politicians have recognized that the full potential for the development of bilingualism and biculturalism cannot be realized in this manner. Joshua Fishman (1966:387) expresses this concern by stating:

> . . . the public school's approach to non-English languages and to non-core cultures in the United States has been that of all official levels of American life, namely, that ethnicity in America and its cultural and linguistic components deserve neither disciplined nor dignified recognition. Thus it would seem that as long as these languages and cultures are truly "foreign" our schools are comfortable with them; or we limit the extent to which public school instruction in languages and culture is live, real and meaningful.

This does not imply that the goal of bilingual-bicultural education is only the maintenance of diverse cultural and linguistic groups. Certainly the specific educational goals for each individual student remain the

educator's priority, but realizing how one may affect the other should have some serious consideration. In other words, if bilingual-bicultural education continues to be an acculturation process with a hurried emphasis toward the learning of English, the same educational failure of the past may be perpetuated: that is, the loss of self-identity and the development of language incompetence. Therefore, as Bruce Gaarder (1967:124) states,

> The question of time and treatment, equal or unequal, is central to the larger question of the alleged handicap of bilingualism most often reported in the literature in school situations where the mother tongue is the subordinate language, given markedly unequal time and treatment, ignored completely, or even made the object of official censure. There is an increasing awareness that the cause of any handicap may not be the existence of bilingualism per se, but school policy regarding the teaching of both languages and the sociological factors extrinsic to the school itself.

These writers are saying that bilingual-bicultural education must begin taking another road, one which leads to the development and maintenance of cultural and linguistic diversity. This has great implications for program organization and objectives:

> Basic to the two language development program is the need to reinforce the non-English ethnic group's self-image as speakers of their native language irrespective of the extent to which their native speech deviates from the "cultivated standard." (Gaarder, 1965:165).

This statement emphasizes that language status is an irreplaceable element in a bilingual program. The program environment and organization must then build this status for the minority language into its "<u>everyday</u>" pattern. This

level of status might again be expressed in terms of Gaarder's "diglossia" structure:

> The answer for the Mexican-American and any enclave of Americans who continue to speak a tongue other than English seems to lie in the concept of "diglossia." Diglossia is the socially recognized and approved use of two languages at the societal level rather than the individual level. This stable relationship is in contrast to the unstable relationship of bilingualism in which the languages compete with each other because the functions of each are not differentiated, not recognized or approved. (Gaarder, 1965:167).

Fishman (1967:36) points out that bilingualism without "diglossia" creates language displacement and mixture:

> . . . such fused varieties may, within time become the mother tongue and only tongue of a new generation. Thus bilingualism without diglossia tends to be transitional.

Ilonka Mackey (1971:87) separates several factors in the diglossia concept: "A policy of planned repartition is composed of a number of language strategies." Dichotomy, as to person, place, time topic, and activity for the use of, and prestige attributed to, a language or languages are seen by Mackey (1971:87) as factors necessary in developing bilingualism. Bruce Gaarder throws further light on this concept by relating it directly to individual bilingualism:

> The terms compound and coordinate illuminate further the distinction between bilingualism in the individual and diglossia in society. Systems, learned in different settings and used in different domains, are more nearly independent of each other. (Gaarder, 1965:168).

Saville and Troike (1970:6) define these phenomena as:

> . . . compound bilingualism is translation from one language to the other, usually because the second language has been learned under those

> circumstances. Also language systems are not kept separate and a considerable interference takes place. Coordinate bilingualism is two separate language systems learned under different conditions which cause minimal interference with each other.

Again, Gaarder (1965:170) expands this concept by showing that:

> Full exploitation of Spanish for intra group, educational and international purposes demands literacy. Along with literacy in Spanish achieved through bilingual schooling in a social context of diglossia would come an unexpected revelation of the excellence of the Spanish spoken in the Southwest.

A simplistic approach to bilingual education which thinks in terms of only language development ignores what is evident in the literature that bilingual-bicultural education is a very complex process which cannot be successfully implemented without political, economic, national, and sociological considerations. Each of these must be considered and included in a well organized educational model.

SPANISH AS A NATIVE LANGUAGE

Education for the Mexican-American in the Southwest has discouraged, if not absolutely forbidden, the use of the Spanish language. This policy is reflected by rules and laws which were in effect in many parts of the Southwest. In fact,

> As recently as October, 1970, a Mexican-American teacher in Crystal City, Texas, was indicted for conducting a high school history class in Spanish, although this case was subsequently dismissed. (U.S. Commission on Civil Rights, 1972:15).

The effects such policies have produced are evident

in the many statistics which reflect the Mexican-American's failure within the American educational system. Statistics show a 40 percent dropout rate by twelfth grade. They show the fact that:

> The average for Mexican-Americans 14 years of age or older in the Southwest is only eight years of schooling compared with 12 years of schooling for the average Anglo-American. (Andersson and Boyer, 1970:108).

They also show that lack of ability to function in the English language has been equated with intelligence--regardless of other linguistic or aptitudinal abilities, and that this has resulted in the fact that "In California, Mexican-Americans account for more than 40 percent of the so-called mentally retarded." (U.S. Office of Education, 1968:1).

There is little argument as to the importance of language as a carrier of culture. The interaction of language within the society has been the subject of much current research. In his article "Models of Inter-action of Language and Social Setting," Dell Hymes (1967:38) seeks to describe and define the many variables within speech systems as well as the importance of language--its relationship to experience, learning, and culture--and provides a view into the complexities of such interactions. Regardless of the technical intricacies of language systems, Senator Mondale (1970:117) states:

> Education experts tell us that language is the most important manifestation of the human personality. Therefore, when the school rejects a child's native

> tongue, the consequences are profound. The child's concepts of his parents, his home, his way of life and his self may all be tragically affected.

The use of the Spanish language is one of the most distinct differences between the Mexican-American and the majority culture. And, as has been stated by the U.S. Commission on Civil Rights (1972:48) report, "The suppression of the Spanish language is the most overt cultural exclusion." Mexican-Americans have suffered in the educational process. The feelings that these policies have aroused in Chicanos is reflected in the following quote:

> Schools try to brainwash Chicanos. They try to make us forget our history, to be ashamed of being Mexican, of speaking Spanish. They succeed in making us feel empty, and angry inside. (Alvarado, quoted in Steiner, 1970:212-13).

Young children just entering the educational process are the most unfortunate victims of this ethnocentric attitude. In this competition oriented society where judgment and categorization begin at a very early age, Mexican-American children are expected to compete in the educational system:

> In spite of the fact that nearly 50% of the Mexican-American first graders do not speak English as well as the average Anglo first grader, they are compelled to learn a new language and course material in that language simultaneously during the first years of their educational experience. (U.S. Commission on Civil Rights, 1972:48).

And Saville and Troike (1969:2) remind us that:

> . . . there are still some who feel that when a child cannot speak English the first day of school he "doesn't have any language at all." By failing to recognize the child's native linguistic resources we prevent him from progressing as rapidly as his

experience and intellectual development will allow.

Originally "bilingual" programs focused almost exclusively on the problems of learning English. As Nedler and Lindfors (1971:150) point out,

> These approaches began to be applied in experimental learning context, and it became evident that the learner progressed more rapidly on both concept and language acquisition when he did not have to learn the concept through the new language, but rather was permitted to use his own language for concept acquisition.

The insistence on English as the only legitimate way of receiving information and processing that information assumes that all important learning begins when the child enters school, and denies the fact that much learning has taken place during a child's first five or six years of life. In fact, Ivan Illich, in Deschooling Society (1972), Paulo Freire, in Pedagogy of the Oppressed (1972), as well as others would dispute the fact that schools actually provide any valid or meaningful education at all.

As Saville and Troike (1970:1) observe:

> A child does not begin learning when he comes to school. Education begins in infancy, and much of the sound system and grammatical structure of his native language have been mastered by the time he is five years old. His language is rooted in and reflects a set of values to a particular group. It is already related to a way of feeling and thinking and acting.

Reading is one of the most important tasks a child will encounter during his first years at school. Again, Saville and Troike (1969:46) state that:

> Initial success in reading is perhaps the single most important goal in primary education, since

> reading forms the basis for much of subsequent education. One of the chief weaknesses of monolingual education programs is that they do not allow a child to begin reading in the language in which he has developed oral competence--unless this happens to be English. The child should begin reading in his dominant language. The child who learns to read first in Spanish . . . may have, in fact a definite advantage over the child who must learn first in English. The writing system of English is not regular, and children must learn that a single sound may be spelled in many different ways. The writing system of Spanish . . . is very regular, with close correspondences between sounds and letters. The child's ability to recognize the relationship between sound and symbol is a major factor in his success in initial reading instruction.

This opinion is reinforced by Giles (1971:376), who states:

> The mental processes which the child goes through during the stage of intuitive thinking (4-7) are characterized for the most part by what Piaget calls "Transductive thinking." That is, the child tends to link together neighboring events on the basis of what the individual situations have in common. . . . One possible inference from this is that early reading and language learning in a bilingual school should be in the language with fewer exceptions, and one with more regular patterns.

During these first years in school, a child will be expected to learn assigned sounds for many symbols and to manipulate these symbols to convey meaning. Many educational policies hinge on the definition of "reading" and the achievement of "literacy" and its interaction with language--a seemingly simple interrelationship. Maria Montessori (1971:131) says: "Language is primarily something that is spoken; its written counterpart is only a literal transfer of the sounds into visible signs."

Gudschinsky (1971:350) defines literacy by stating:

> That person is literate who, in a language he speaks, can read and understand anything he would have understood if it had been spoken to him; and can write so that it can be read, anything he can say.

Thonis (1970:2) states that communication can only occur when both speaker and listener "share a mutually understood set of oral symbols and perceive the objects for which these symbols stand from the viewpoint of a common culture." She continues referring to the printed word:

> Written language is secondary to oral language for print owes its very existence to speech. Written language, then, only conveys meaning when the writer and the reader have bonds of mutual experience expressed in symbols known to both of them. (Thonis, 1970:2).

Finocchiaro (1965:7) expresses the same relationship of spoken language to written language in the basic premises of her book English As A Second Language from Theory to Practice:

> Writing systems originated long after spoken language existed. To the best of our knowledge, man and spoken language were created simultaneously. For these reasons, the spoken language is considered primary.

Writing is thus considered a secondary system--derived from speech.

Another observation on the nature of literacy is made by Gudschinsky (1971:350) in a paper presented at a Conference on Child Language where she points out that "a person becomes literate only once in his lifetime," and that

> Learning to read additional languages and scripts after the first one is a matter of enlarging his inventory of symbols and using his literacy skills in the context of a new language structure.

In another paper presented at this conference,

Eleanor Thonis (1971:463) reflects the same philosophy, stating:

> Should the child have a good start on his first language exposure, there are some previous learnings which he may bring to his new language task. He already has a background of experiences, sensations, precepts, images, concepts, sounds and symbols. He possesses a storehouse of information about language, what it is made of and how it works.

The initiation of the reading process for the Mexican-American child whose dominant language is Spanish becomes the next consideration.

As the Approaches to Beginning Reading (Aukerman, 1971) makes obvious, there are a myriad of ways to begin the reading process in English. The never-ending search for a good reading method in English is largely the result of the very poor sound-symbol correspondence of the English language.

Spanish has excellent correspondence between the sounds of the language and its symbols. However, Herbert (1971:502) tells us that:

> Preliminary investigations into reading programs in the United States revealed that Spanish-speaking children were taught to read English as well as Spanish, utilizing the same procedures that are employed to teach monolingual English speakers to read their native tongue. Many methods in the teaching of literacy in English include ingenious and complex devices to show the underlying system in a written language that is intricate and often times irregular. The Spanish writing system, on the other hand, has a relatively uncomplicated phoneme-grapheme correspondence with few irregularities. It seems then that many of the methodologies employed to teach literacy in English do not apply to the teaching of that skill in Spanish.

A similar observation is made by Serafina Krear (1971:

257), who states:

> Many activities designed to prepare a speaker of English to read in English have little if anything to do with preparing a Spanish speaker to read in Spanish. The grapheme/phoneme fit in Spanish precludes the necessity of many pre-reading activities for English.

As the review of the literature has shown, there are very few documented programs for developing native language for the native Spanish-speaking child which incorporate both the Latin American model of reading, as far as using a phonetic approach which capitalizes on the sound-symbol correspondence of Spanish , with the emphasis on language development and comprehension which exists in reading programs in the United States. Little has also been done with the added dimensions of placing the reading program for the Mexican-American child within a learning center oriented environment and using techniques such as cross-age tutors, parent volunteers, and skills development on a one-to-one basis.

SECOND LANGUAGE INSTRUCTION

The non-English speaking student has long been a problem in the field of education. As early as 1948, the literature recognizes that the general methods used to cover specific problems were not adequate in non-English speaking children in elementary schools, as stated in Teaching Spanish-Speaking Children by Lloyd S. Tireman (1948). The problem has continued to exist, as was stated

at the Conference on Child Language in 1971 when Paul R. Streiff (1971:1) stated:

> Only a decade ago was it realized that the prevailing approach did not seem to be working. A new view suggested that for the non-English speaking population, English is really a second language requiring a whole new curriculum rationale and methodology.

Two types of programs have been developed in an effort to alleviate this problem: English as a second language programs and bilingual education programs. The English as a second language programs deal with the language problem alone. The bilingual program incorporates a total curriculum through the use of two languages. According to the study conducted by John Stanley Rogers (1973), The Effect of a Bilingual-Bicultural Education Program on Academic Success and Self-Esteem, the following results were indicated. The bilingual program was more effective than the English as a second language program in developing a positive self-concept. Spanish speakers as well as English speakers in the bilingual program developed a higher self-concept than those in the English as a second language program. The bilingual program was more successful in developing academic achievement than the English as a second language program. Six schools were sampled in this study, using the kindergarten and first grades.

As the education of non-English speaking students continues to be considered, a new outlook has emerged where the dual use of languages in bilingual education has gained

status and importance. According to Theodore Andersson (1968:4), the learning of English no longer overpowers the non-English speaker as his prime objective in education:

> The Spanish surname American has been conditioned by decades to realize that in fact he must learn English to compete successfully in a society that believes he must. The error comes in believing that the maintenance and cultivation of Spanish will somehow interfere with his learning English. No wonder he is confused by recent changes in the story. Anglos have told him for generations that he should forget his Spanish and learn English; now he is told by these same people that learning to read and write in Spanish will make it easier to learn reading and writing in English. He is told, too, that not only can he compete with the English-speaking child in English, he can also excel him in Spanish.

This new view has been expressed in the United States Congress by Senator Ralph Yarborough (Andersson, 1968:4) and his colleagues. It will affect countless children who had previously been doomed to educational underdevelopment.

This language duality is the prime objective in the development of coordinate bilingualism. As it implies, coordinate bilingualism makes both languages functionally equivalent. Coordinate bilingualism offers many advantages to both language groups. In an area where two languages are used, "individuals with highly developed competencies can be very useful in interlocutor roles like teachers, translators, and business representatives." (Fishman and Lovas, 1970:219). The learning of a second language provides an opportunity to gain cultural insights. By learning about other people and cultures, attitude changes can be affected which may in the long run bring about social change. The challenge

of learning a second language may motivate the learners of both groups to further their educations.

Motivation is an extremely important facet of any learning experience. Learning takes place only when a need has been supplied. Motivation provides the need through which learning takes place. Psychologists have claimed that little learning takes place if there is no motivation. (Mackey, 1967).

Learning a second language is even more difficult than learning one's first language. Mackey (1967:122) has stated that:

> In learning the native language the motivations are most compelling. The language gives the child control of his immediate surroundings. Therefore, the need to learn to communicate in a second language is generally less urgent.

If this is true, motivation must then be highly developed in a second language program and geared to the age level of the learner. Mackey (1967:122) continues: "With a very young child it is necessary to incorporate a need to learn in the method." According to Jean Piaget (Vigotsky, 1962: 1), play is the work of children. Then it seems logical that children would learn a second language if it were incorporated into play situations.

It is presupposed that culture is manifested in language, and that language cannot be taught without the teaching of culture. In bilingual education two different cultures come into contact and are exchanged by the students through the teachers and the environments. For this reason,

second language instruction in a bilingual school can best be served by providing a balance of linguistic and cultural models. The teachers serve as cultural as well as linguistic models. Two instructors, one for each of the two languages, would provide better models. According to Eleanor Thonis (1971:467), "it is vital to have the best language models available in both languages as children will readily imitate error in phonology, intonation, and structure." Peers are an equally important source of linguistic and cultural models. An equal number of students in each language group will provide a balance of language exposure:

> Theoretically (and ideally) the best results (for maximum language exposure) in bilingual instruction may be expected in schools having approximately equal numbers of English and non-English speaking pupils as is the case in Miami, Florida. English speaking pupils can learn to understand the second language while non-English speakers learn to understand and speak English. (Ballesteros, 1969:876).

By providing two separate classrooms at each level, the environments can maintain separate and distinct cultural backgrounds, thus providing balanced contexts for the teaching of a second language: "It would seem that teachers should keep the languages growing in separate contexts so that coordinate language systems may result." (Thonis, 1971:467).

It is thus accepted by the authors that the best means of conducting a bilingual program is by providing two language models and two environments, each maintaining the use of a separate language, and in this way to affect the

minimization of confusion for the student as to which language is expected in each environment. Wallace E. Lambert, J. Havelka, and C. Crosby (1958) first considered the matter of environments as to language learning in The Influence of Language Acquisition Contexts on Bilingualism. At that time they felt that bilinguals, having learned their two languages in either separate or fused contexts, can use the languages separately. By 1971, in a paper for the Conference on Child Language, "The Home-School Language Switch Program--Grades K through Five," Wallace E. Lambert and G. R. Tucker (1971:45) make the following statement which promotes the idea of separate language streams:

> Instead a general guiding principle is offered: in any social system where there is serious widespread desire or need for a bilingual or multilingual citizenry, then priority for early schooling should be given to the language or languages least likely to be otherwise neglected. In the bilingual case, this will often call for the establishment of two elementary school streams: one conducted in language A and one language B, with teachers who either are or who function as though they were mono-lingual.

Another consideration for language learning is the optimum time for initiating the study of a second language. Since there seems to be conflicting opinion, it is here assumed that the optimum age to begin instruction is in the very earliest grades. Theodore Andersson, in "The Optimum Age for Beginning the Study of Modern Languages" (1968), an unpublished report for the Department of French at Yale University, attempts to sift through the available evidence which he contends is pitifully small to determine when and

how instruction in a second language should begin in school. He concludes that the optimum age seems to fall within the span of ages from four to eight. While Frieda L. Levinsky, in "Theory and Practice of Bilingualism" (1970), contends that children cannot learn a second language before the third grade unless they are gifted intellectually; although she does state: "Young children often learn a second language without the resentment of having to start as a beginner." (Levinsky, 1970:22). Chester Christian readily assumes that children much younger than six may learn more than one language. In "Differential Response to Language Stimuli Before Age 3, A Case Study," a paper presented to the Conference on Child Language, November 22, 1971, the practical ability to learn a second language is not the chief concern--the maintenance of this language is. It is Mr. Christian's contention that the ability in the minority language may be lost unless (1) there is exclusive use of the minority language by a person of the child's household, (2) there is development of literacy of the minority language, and (3) there is use of the minority language in teaching the child academic subjects other than language. "The key concept in these statements is regarded as 'prestige.'" (Christian, 1971:14). Accordingly, Mr. Christian feels the degree of success or failure of bilingual education in the home or in the school is considered proportionate to the degree to which prestige is associated with each language being learned.

CONCEPT DEVELOPMENT

Bilingual public education in this country may be an important factor in the planned implementation of cultural pluralism. This writer researched concept development as one strand necessary in developing and maintaining bilingualism in the elementary classroom. In doing so one must first look at bilingualism and how it has been viewed. Fishman (1967) and O'Doherty (1958) show that research on bilingualism very often points to the "problem" of bilingualism where evidence is presented in which bilingualism retards academic achievement and intelligence. "As a result, many of the purported 'disadvantages' of bilingualism have been falsely generalized to the phenomena at large," or, as he goes on to discuss, "not analyzed within the context of diglossia." (Fishman, 1967:36). O'Doherty, in his conference paper (1958:285), refers to the pseudo-bilingual:

> . . . where the complicating factor makes it so difficult for policy makers to assess properly the value of many of the hundred-odd studies available under the general title of bilingualism or value assessment of the intelligence of a bilingual or pseudo-bilingual child.

Many of these studies involve Mexican-American students. Lambert and Peal present the results of a study of bilingual ten year olds, where if the bilingualism is balanced these students were superior to monolinguals on verbal and non-verbal tests of intelligence, had "greater mental flexibility, superiority in content formation, and a more diversified set of mental abilities." (Lambert and Peal, 1962:

20-21). A direct relationship cannot be made between the success of the Montreal students and Mexican-American students in the southwestern United States. A major reason is that many so-called Mexican-American "bilinguals" are not balanced bilinguals at all but have developed a compounding or confusion between languages. Rosenthal and Jacobson (1968) show that socio-economic level and teacher expectations are two other major differences between the Montreal group and a typical Mexican-American group of students: "his shortcomings may originate not in his different ethnic, cultural, and economic background but in his teacher's response to that background." (Rosenthal and Jacobson, 1968:1). Many writers ultimately arrive at another conclusion about the development of balanced bilingualism. This conclusion is that security in the native vernacular must precede any development of a second language in order to maintain both at a coordinate level. In a paper dealing with foreign language teaching, Harry Singer (1956:456) states:

> More specific as a predictor of success is language proficiency in the vernacular. Students tend to learn a foreign language in proportion to the degree of mastery of their own language.

Christian (1971), Thonis (1971), Krear (1971), and Mackey (1971) all point to the development of literacy in the mother tongue as a necessary factor in maintaining true bilingualism.

In seeking to develop balanced bilingualism in the

Nestor School program, many of the above premises have been organized systematically into the program. The concept development strand is a stage in this development. This strand involves the conceptual areas of the curriculum: math, science, and social studies. In a paper presented at the Conference on Child Language in Chicago in 1971, Chester Christian states that:

> . . . practical ability to use a minority language may be lost rapidly after the age of six unless the minority language is used in teaching academic subjects other than language; the higher the prestige of the teacher and the more academic the subject, the greater the possibility of continuing development of minority language. (Christian, 1971:1).

Christian also points out that success of bilingual education is directly related to the degree of prestige associated with each language. In the United States the most prestigious subjects are "those associated with cognitive development." (Christian, 1971:2). At this same conference Eleanor Thonis proposed:

> If the theory that thinking relies totally upon the quantity and quality of verbal symbols then it is reasonable to assume that the more precise the language used, the clearer the thinking results. (Thonis, 1971:465).

Carrying this assumption further, once proficiency in the mother tongue is established then conceptual development should also proceed in the second language in order to develop separate thinking systems, or coordinate bilingualism, as Thonis (1971:466) states: "keeping languages growing in separate contexts so that coordinate systems may result. These systems appear less subject to interference

and confusion." Serafina Krear (1971:257) presents a "preview-review" model in which conceptual areas can be developed in the first and second language without mixing languages. This model has been adapted in the Nestor program and will be presented in detail in the section under the concept development strand.

Research strongly indicates that language is a necessary factor in maintaining cultural diversity. However, this maintenance must be in the form of a balanced or coordinate bilingualism--not the assimilation of one language by another or a poor development of either one. Also, conceptual development and thought processes seem directly involved in the development of this "balanced bilingualism." If these assumptions are valid, this writer sees very little in the literature to indicate any systematic concept development curriculum for the maintenance of full bilingualism in any of the programs in the United States.

CULTURAL AWARENESS

"Culture is that which is common to a group of people and is manifested in their language, diet, costume, social relationships, values and beliefs." (Aragon, 1973: 1). If one is to accept this definition of culture, it becomes clear why the Mexican-American child has experienced problems in school. The reason for this could be, as Ralph F. Robinett (1971:467) points out, that:

Educators have generally erred on the side of

> underestimating the value of the home language and the culture it reflects. What happens to the thousands of children speaking little or no English who enter U.S. schools every year is as varied as the settings into which the children enter.

These settings may include such situations as schools where they would be the minority, the majority, urban, rural, or where the percentage would be equal. The environment in each one of these situations would affect these students differently. Some of these students would be able to cope with any one of these situations without any effects from it. Others would not be able to cope and would fall behind in academic achievement resulting in retention, low grades, poor attendance, poor self-image, and eventually dropping out of school. Some of these students survive academically, but very often at the expense of rejecting their home education, thereby isolating themselves emotionally and culturally from their families:

> In the bilingual's crises of school adjustment, he has often been forced by the ethnocentricity of the school to face an even more profound crisis of identity. In many cases he has been urged to choose between the world of his heritage, as reflected by his language and customs, and the world of the dominant culture, as reflected by the expectations of the school. (Robinett, 1971:468).

This straddling of two cultures is a process which leaves a definite imprint on the individual with regard to his self-identity. As pointed out by Sophie L. Elam (1960:258):

> For the child who is in the process of learning the social roles, the sociocultural selections create stress. He is caught between the culture of his parents and the culture of the school. Thus, he is forever being forced to choose between conflicting sets of values, being rewarded or punished alternately,

or simultaneously by the conflicting cultural systems.

There are at least four stages of development an individual must go through before becoming completely acculturated into a second culture. According to Horacio Ulibarri (1969:29), they are:

> . . . bewilderment, overcompensation, regression and biculturism. In the first stage all the forces of the new culture that beset the individual are for the most part incomprehensible to him and perhaps he may not even be conscious of them. The individual is likely to succumb to many negative escapes such as alcoholism, dope addiction and the like. This perhaps is the lowest level in the process of acculturation to which an individual may fall. Unfortunately, these patterns tend to be widespread among bilingual minorities attending school.

If the individual is able to overcome this pitfall,

> . . . he then acquires a degree of independence by having acquired greater functionality in the new culture. At the same time a subconscious, emotional change has been occurring and the rewards that had been undesirable or incomprehensible now become desirable and meaningful to him. (Ulibarri, 1969: 30).

Now comes the second stage, which is

> . . . characterized by overcompensation, ultra proficiency, and conspicuous dexterity in the new socioculture. During this time he feels remorse in being a member of an ethnic minority and wishes he could pass for an Anglo-American. The individual in this stage becomes ashamed of his native cultural heritage and in compensation degrades the sociocultural practices of his people. He refuses to use his native language even though his level of proficiency in his second language, English, may be poor.
>
> The third stage can be characterized by deliberate regression of the individual to his native culture. He likes to think of himself as being both bilingual and bicultural. However, the regressions that take place pertain only to the peripheral levels, not penetrating into the center-core value area of the culture. (Ulibarri, 1969:30).

The fourth and final stage of acculturation is:

> . . . the stage of biculturism. Here the individual truly understands the major aspects of both sociocultures and has developed a wholesome functionality in both. (Ulibarri, 1969:31).

Some minority individuals attain all four levels of acculturation, thereby becoming truly bilingual-bicultural. Unfortunately, most do not. Some individuals may reach only one or two or three of the stages. If as parents they stopped on the first stage, then they feel that their children should learn the dominant language and all their problems will be solved. If the parents find themselves in the second stage of acculturation, then they do not let their children learn their native language. They may, however, allow them to learn another language such as French or Latin. If the parents find themselves in the third stage they will encourage their children to study their native language, which has now become their second language. Parents' attitudes about the children's education are usually dependent on their level or stage of acculturation.

Another problem faced by Mexican-American students, as pointed out by Celia S. Heller (1966:45), is that:

> . . . our public school philosophy is based on the assumption that education is not the sole responsibility of parents but that at a certain point society, or rather its agencies, must step in and take over the task of educating its members.

There are basically two schools of thought as to what the role of education in U.S. society should be. One is that which states that the educational institutions should concem

themselves only with cognitive learning. The other school of thought is that the school should embrace more than just the cognitive domain.

Students are people who have self-images, emotions, customs, values, and beliefs. Therefore, it is very difficult to teach only in the cognitive domain. Learning deals with the total person; and if the person does not identify with the learning process or data, it becomes very difficult to understand. If one is of the opinion that education should embrace more than the cognitive domain, then it becomes necessary to adapt the learning process to the needs and experiences of the students. As the students gain a better understanding of the school environment, they are exposed to the experiences of the dominant culture.

The development of cultural awareness in bilingual-bicultural education programs should be an important part of the curriculum. The learning process will be greatly enhanced if this part of the curriculum is planned carefully and with the needs of the students in mind. "Bilingual-bicultural education should open the doors for the bilingual child, broaden his horizons, and enhance a more integrated development of his personality." (Ulibarri, 1969:46).

Chapter 3

METHODS OF RESEARCH

This study presents the process of development for a bilingual-bicultural model as it has evolved during a five year period at Nestor Elementary School, Imperial Beach, California.

The information presented here will explain the interpretations and causes of certain decisions made during the evolution of the program. It will address itself to a process description of the following:

I. Instructional Program
   - A. Program Environment
   - B. Staff
   - C. Physical Setting and Organization

II. Staff Development and Inservice

III. Curriculum Development and Materials Acquisition

IV. Evaluation
   - A. Evaluation Design
   - B. Objectives and Instrumentation
   - C. Evaluation Questions

V. Community
   - A. Decision Making
   - B. Community Involvement

C. Parent Education

The second focus of this study will be to present the process of development of the four major curriculum strands. These strands, with the organizational component produce the total model.

Although each of these components contains elements that can be implemented separately, the effectiveness of the model is determined by its implementation as a whole.

To complete this comprehensive effort four people collaborated on a joint thesis. Each investigator was responsible for a part of the total organizational model as well as for an individual curriculum strand.

The Nestor Bilingual-Bicultural Program is an alternative school within a school. Three hundred of Nestor's 560 children are involved in the program. In 1974-1975, two classrooms at each grade level were involved in the bilingual program (kindergarten through grade six). In the program 50 percent of the children are Spanish dominant and 50 percent of the children are English dominant. In the remainder of the school population, 30 percent of the children are Mexican-American and 70 percent are non-Mexican-American.

A reason for selecting Nestor for the pilot program was a needs assessment of reading scores of Mexican-American students which indicated a significant lack of competency in English language skills.

During the last five years of Project Frontier, a

kindergarten through grade six Bilingual-Bicultural Education Model has emerged at Nestor. As a result of the success of the program, the district has bussed other Mexican-American students to Nestor, and consequently the program now serves children from nine other schools in the district. Participation in the bilingual education program is on a voluntary basis. The ratio of English to Spanish speaking students in the bilingual program, however, has been maintained at a 50/50 ratio.

I. INSTRUCTIONAL PROGRAM

Program Environment

Because of quotes such as that of Knowlton (1970) stating that the use of the Spanish language alone had not been enough to significantly change the statistics related to the Mexican American student, it was felt that the environment in which the bilingual program would function was vital to its success and that the staff was the most important part of this environment. The Nestor model was developed to consist of two team teachers at each grade level. One of the teachers was a bilingual person with Spanish fluency representing the Mexican-American culture, and the other teacher was a monolingual-English speaking person representative of the majority culture. These two individuals were to be responsible for teaching only the curriculum of their respective language. This arrangement was based on the premise outlined previously that no

interchange of languages would take place by one teacher.

Through previous experience with English as a second language classes and during the first year of the program, it was noted that many children were already of mixed dominance and that some of the things teachers were doing were not helping to develop either language without a dependence on the other. For instance, a translation of the topic being studied or the mixing of the two languages by the teacher only tended to reinforce the student's habit of mixing the languages. It was also found that because most of the bilingual teachers were English dominant (having been raised and educated in English) that English tended to dominate in a non-structured situation.

As far as the second language area was concerned, it was found that if the native language was used students tended to use it as a crutch and the second language was not being learned as quickly, especially in the case of Spanish as a second language. It was therefore felt that not only should languages be defined by structured time periods, but by a clear and separate environment as well.

Having bilingual teachers was of primary importance. Although many programs used paraprofessionals for Spanish instruction, the teacher still represents the authority figure in the eyes of students, regardless of how open or non- raditional he or she may be. Consequently, the member of the professional staff serves as a liaison person to ensure that the level of both languages and cultures is

equally maintained.

Paraprofessionals

The paraprofessionals in the program were bilingual teacher assistants. The assistant in the English component was a person whose most proficient language was English. The use of such personnel was critical since these individuals would assist in small group instruction in the language of that component, not only in content areas for native speakers but also in the second language area as well. They must therefore have been excellent language models.

The paraprofessionals were to assist directly in instruction and not in merely doing chores for the teachers. This kind of competency reduced the pupil-teacher ratio and increased the number of community-cultural resources among the staff. Other basic requirements for all staff members included the willingness and ability to work with other staff members: i.e., team-teachers and assistants, general staff, and the coordinator. Of particular importance was the staff's commitment to giving additional preparation time for the development of Spanish materials and related support activities such as inservice education, meetings and planning sessions, and in community participation activities.

Coordinator

Because of the extensive coordination and team work required to make a comprehensive and coordinated program

function, a coordinator free from classroom duties and with the mobility and responsibility to insure that the entire staff was moving in the same direction was considered essential.

The onsite coordinator of the program had the most focal role in the maintenance and development of the bilingual program. It was the coordinator's responsibility to provide communication among teachers. This was to produce continuity and sequential development between grade levels. By working, informing, and monitoring the efforts toward a congruent philosophy of bilingual education, the coordinator prevented the isolationism that often occurs when teachers work alone in their separate classrooms. It was also the responsibility of the coordinator to provide organized inservice and up-to-date information on the latest developments in bilingual education. The coordinator had many opportunities to organize the community efforts so as to benefit the children in the classroom. At first her primary duty was establishing the program and making sure that it remained stable. Gradually the emphasis changed to include the role of becoming a liaison between the community, the school, and the administration.

As the program grew and a need was seen for more parental involvement, the role of the coordinator included the development of a parent volunteer program. With this new aspect came the need for providing parents with inservicing and parent education in the fields of child

development and literacy and these classes were also established by the coordinator.

Physical Setting

The division of labor which would allow each teacher to devote himself to one language, as well as the rationales for separation of languages and the building of status for Spanish, led to the development of the program's physical setting.

Each grade level consisted of two adjacent classrooms, one with a bilingual teacher and the other with the English speaking teacher. The students changed rooms, depending on the language of instruction.

ENGLISH SPEAKING TEACHER	BILINGUAL TEACHER
Mixed Group	Mixed Group
One-half Spanish speaking	One-half Spanish speaking
One-half English speaking	One-half English speaking
Native Language	Native Language
English speaking	Spanish speaking
Second Language	Second Language
Spanish speaking	English speaking

These are the three typical situations a student experienced daily in the bilingual program. The amount of time spent in each situation depended on the grade level and the readiness of the individual student. Much of the

literature (Thonis, 1971; Singer, 1956; Gudschinsky, 1971) demonstrates a strong foundation in one's own native language is a prerequisite to developing a strong second language. Both Spanish-speaking and English-speaking students in the Nestor School area needed native language development. In order to develop this strong first language, the subsequent percentages were arrived at. These times are relative and the level at which a student was working depended on his own individual readiness.

	Percentage of Time in Native Language	Percentage of Time in Second Language
Kindergarten	80 (first 2 or 3 months may be a 90 to 10 percent ratio)	20
First Grade	75	25
Second Grade	70	30
Third Grade	60	40
Fourth Grade	55	45
Fifth Grade	50	50
Sixth Grade	50	50

The use of the native language and second language in the bilingual instructional program will be shown here as to the percentage of time spent and the gradual development by grade level.

The following chart and the actual class schedules will give the content and time allotments for each situation.

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
N.L.[1]	Readiness Math Science Social Studies	Reading Language Arts Math Science Social Studies	Reading Language Arts Math Science Social Studies	Reading Language Arts Math Science Social Studies	Reading Language Arts Social Studies	Reading Language Arts
S.L.[2]	Listening Speaking	Listening Speaking	Listening Speaking Reading	Listening Speaking Reading Writing	Listening Speaking Reading Writing	Listening Speaking Reading Writing
C.D.[3] (Mixed)	P.E.[4] Art Music Opening Sharing	P.E. Art Music Opening Sharing Science	P.E. Art Music Opening Sharing Science Math	P.E.-Art Music Science Math	P.E. Art Music Science Math	P.E. Art Music Science Math Social Studies

[1]N.L. = Native Language

[2]S.L. = Second Language

[3]C.D. = Concept Development

[4]P.E. = Physical Education

Figure 1

Instructional Program Language Balance Chart

As can be seen at the beginning levels only the non-academic and non-threatening areas are conducted in the mixed group. However, the concept development areas begin to be developed gradually until there is a 50/50 balance by grade five.

A preview-review model is used to teach concepts in a second language mixed group situation. This is a developmental process. Lessons are not translated, but reinforced through a variety of activities. For an indepth discussion of the preview-review model and concept development in this bilingual program, see "The Concept Development Strand."

The actual class schedules begin on the following page.

KINDERGARTEN

11:45 - 12:00	Opening Exercises; attendance, pledge, collect milk money, songs.....	Mixed*
12:00 - 12:15	Sharing.....	Mixed*
12:15 - 12:35	Second Language Instruction English as a Second Language Spanish as a Second Language.....	S.L.
12:35 - 12:55	Activity: P.E. and Music.....	Mixed*
12:55 - 1:15	Language Arts.....	N.L.
1:15 - 1:45	Activity: Art.....	Mixed or N.L.
1:45 - 1:55	Milk, etc.....	Mixed
1:55 - 2:15	Recess.....	Mixed
2:15 - 2:35	Math.....	N.L.
2:35 - 2:45	Evaluation.....	Mixed
2:45	Dismissal.....	Mixed

Mixed: 30 children grouped together--15 whose native language is English and 15 whose native language is Spanish.

Instruction in native language, grouped by native language.

Instruction in second language, grouped by second language.

N.L.: native language.

S.L.: second language.

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*Alternate language by day.

FIRST GRADE

8:30 - 8:45	Pledge and Roll	Mixed*
9:00 - 9:30	Second Language Instruction E.S.L.: English as a Second Language S.S.L.: Spanish as a Second Language	S.L.
9:30 - 9:45	Recess	Mixed
9:45 - 11:30	Reading, Literature, Writing, Learning Centers	N.L.
11:35 - 12:20	Lunch	Mixed
12:20 - 12:30	Literature, Drama, Poetry	Mixed*
12:30 - 1:00	Math	N.L.
1:00 - 1:40	Science-Social Studies	Mixed* ** (Limited)
1:40 - 2:00	Physical Education	Mixed*
2:00 - 2:20	RRR (SWCEL)	Mixed*
2:20 - 2:25	Evaluation	Mixed
2:25 - 2:30	Ready for Dismissal	Mixed
2:30	Dismissal	Mixed

Mixed: 30 children grouped together--15 whose native language is English and 15 whose native language is Spanish.

Instruction in native language, grouped by native language.

Instruction in second language, grouped by second language.

RRR: Reinforced Readiness Requisites.

SWCEL: Southwest Cooperative Educational Laboratory.

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*Alternate language by day.

**Preview-review model.

SECOND GRADE

8:30	8:40	Opening Exercises, Social Development	Mixed*
8:40	9:30	Math	N.L.** (Limited)
9:30	9:45	Recess	Mixed
9:45	10:45	Second Language--Oral and Reading	S.L.
10:45	11:30	Social Science, Science	N.L.** (Limited)
11:35	12:20	Lunch	Mixed
12:20	12:50	Language Arts, Literature	N.L.
12:50	2:00	Reading	N.L.
2:00	2:20	Physical Education	Mixed*
2:20	2:25	Evaluation	Mixed
2:25	2:30	Ready for Dismissal	Mixed
2:30		Dismissal	Mixed

Mixed: 30 children grouped together--15 whose native language is English and 15 whose native language is Spanish.

Instruction in native language, grouped by native language.

Instruction in second language, grouped by second language.

N.L.: native language.

S.L.: second language.

---

*Alternate language by day.

**Preview-review model.

THIRD GRADE

8:30 -	8:55	Opening Exercise.....	Mixed*
8:55 -	9:30	Xerox Science or Activity.....	Mixed**
9:30 -	9:45	Recess.....	Mixed
9:45 -	11:20	Reading and Social Studies.....	N.L.
11:30 -	12:20	Lunch.....	Mixed
12:30 -	1:20	Reading and Oral Second Language.....	S.L.
1:20 -	2:15	Math.....	Mixed**
2:20 -	2:45	Physical Education, Music.....	Mixed*
2:45 -	2:55	Evaluation.....	Mixed
2:55		Dismissal.....	Mixed

N.L.: native language.

S.L.: second language.

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*Language alternated by day or week.

**Preview-review (first and fourth weeks for math).

II. STAFF DEVELOPMENT AND INSERVICE

A continuous program of inservice and staff development has been considered an integral part of the development of the bilingual-bicultural program at Nestor Elementary School. In the beginning stages of development a concerted effort was made toward inservicing all of the teachers. As time went on staff development became an ongoing process and contributed in the maintenance of a quality educational model. New staff members were added each year and the inservicing was necessary to develop their skills and attitudes. With the returning staff the inservicing required the refining of skills and the developing of new ones in innovative areas of instruction as this information became available in the areas of self-concept, second language, and cognitive learning.

Much of the training of staff members has been done within the program since most of the institutions of higher learning still do not have adequate programs. Training was necessary in the areas of methodology in bilingual education, competency in Spanish language arts, techniques in second language instruction, and the curriculum development of cultural awareness.

Spanish foreign language instruction at the secondary and college levels very rarely developed the ability necessary to instruct native speakers in the language and/or the methodology necessary to develop their native language.

Mexican-American teacher candidates are few in number since the educational system has failed to meet the needs of many of these students and most of them fail to reach college level. As the more experienced staff members acquired the necessary skills, they have assisted in this ongoing inservice process.

New teachers and instructional aides were required to attend pre-service programs. They were instructed in the basic philosophy of bilingual-bicultural education. Methods and techniques for teaching second language in English as a second language and Spanish as a second language were discussed and practiced for implementation in the classroom. Methods for teaching Spanish native language reading have been in a process of continual development. Each inservice has helped in evaluating our progress and in the development of new materials. Cognitive learning in the second language has also been the objective of many inservices. The new teachers were assisted in the development of classroom organization in a bilingual setting, planning time schedules, and initiating lesson plans.

Returning teachers and instructional aides also attended the pre-service programs in which they assisted in instructing the new staff. Class schedules and behavioral objectives were revised to become more appropriate and to fit individual needs. Time was necessary to refine the scope and sequence of Spanish reading, second language, and concept development skills in the second language. New

curriculum materials were also developed.

The pre-service programs were held during the summer, usually a week before school began. A five-day program and a six-hour daily schedule provided time for lectures, discussions, and work sessions.

An ongoing inservice program was conducted throughout the year in a series of ways: staff meetings, planning sessions, classroom observations, and some outside resources.

The staff meetings were held weekly after school. They served the purpose of disseminating information, planning school and community programs, and implementing the evaluation program. The pre-service objectives continued to be developed at these meetings.

Weekly planning sessions were also held for each grade level. The coordinator met with each team of teachers after school or when most convenient. The development of units of study in major areas where little curriculum had been developed such as Spanish language arts, cultural awareness, and cognitive development in the second language were the prime objectives. Discussions of individual or team problems and needs took place. Planning for future lessons and writing of behavioral objectives were also important parts of these weekly sessions. Weekly contact at both levels, total group and individual levels was found to be necessary. Group meetings maintained cohesion of philosophy and sequential development, while grade level

meetings met individual and curriculum needs. As time passed a balance between both types of meetings was found to be the best way to meet all the needs of continued development.

Classroom observations were conducted regularly by the coordinator and were one of the most important means of quality assurance. A rapport was developed between the coordinator and staff so that the coordinator was not seen as an evaluator but rather as an individual who is there to assist in meeting needs as they arise. The feedback received from these observations was valuable as a means of improving each teacher's techniques.

The coordinator also conducted monthly meetings with the instructional aides for the purpose of refining their skills in the classroom, discussing any problems, and reviewing the philosophy of the program.

Some outside resources have also been incorporated into the development of the inservicing program. In the summer of 1970, the program coordinator and several teachers and aides attended institutes by the Southwestern Cooperative Educational Laboratory (SWCEL) for training in the use of the Oral Language Program. The Oral Language Program has been the basic audio-lingual program for teaching beginning listening and speaking skills in English to Spanish-speaking students. The coordinator attended an additional institute, to become a quality assurance specialist in order to maintain a quality program by providing additional inservice throughout

the year. This was done through classroom observations, the use of behavioral checklists, and by providing this information to SWCEL. Although this was only required for one year, this essential quality assurance for the Oral Language Program has continued to this time. New teachers using the materials have been trained in-house with subsequent observations and feedback. Much of the same training and evaluation has been applied to the Spanish as a second language program as well. During the school year 1972-73, the program coordinator conducted classes in the Hilda Taba teaching strategies. The coordinator had been trained at United States International University, San Diego, California. Throughout the course teachers would use and tape record the strategies in their classroom, then receive feedback from the instructor. This training included special sessions with aides on questioning strategies.

Although most of the inservice objectives were met within program activities, various outside resources were tapped, i.e., visitations to other programs, workshops available through the County Office of Education, and other educational agencies and professional growth classes.

Additional special workshops were held throughout the year, such as the Title III Prolexia project workshop which involved all the teachers kindergarten through third grade in activities and information on individualization of instruction and ideas for experience centers.

Staff Selection

The screening of all perspective personnel has been a continuously cooperative effort by the district administration, the principal, and the program coordinator. During interviews language assessment was made by written and oral means. The perspective candidates were asked to help in the classrooms for a few days in order to make a more valid assessment. Gradually more coordination between the local teacher training university and this program has taken place, and more student teachers have participated in the program. The coordinator has taught classes in bilingual education at the San Diego State University, San Diego, California, and as a result many perspective teachers have requested Nestor School's bilingual program in which to do their student teaching. Consequently, a more thorough evaluation of these candidates has taken place.

III. CURRICULUM DEVELOPMENT AND MATERIALS ACQUISITION

Curriculum development and materials acquisition was one of the biggest problems facing the staff at Nestor School. No sequential curriculum in any subject area was available in Spanish at the inception of the bilingual-bicultural program. Many of the commercial materials available from Mexico, Spain, and South America were not suitable because they combined printing and cursive writing. The vocabulary in these materials differed for different

areas even though both were correct. The domestic materials were designed for children who already knew how to read and did not use the phonetic approach. Therefore, it was decided to write materials appropriate to the Southwestern area of the country. Summer workshops, release time during the school year, and after school workshops were arranged so that the staff at Nestor School could write these materials. Some materials were written independently of school time by the authors of this study and others.

It was agreed that the curriculum, in accordance with the objectives of the program, should include units of study about both cultures. These units of study would fall under the heading of social studies and/or language arts. The curriculum was developed as it was needed. As each level was added on to the program, the curriculum for that level was then developed.

In the area of language arts, vowel worksheets for the learning of the sound/symbol correspondence of the vowels in Spanish were developed for the readiness level.

A series of Spanish readers, Programa Básico de Lectura para Niños, was developed for Level I. It used a phonetic approach to teach reading. It was deemed that this approach was best because of the excellent sound/symbol correspondence of the Spanish language. Reinforcement worksheets and activities for the basic reading skills were also developed. Once the students knew how to read, some domestic materials were used and comprehension worksheets

for these books were developed.

A spelling program for Level II, sentence construction worksheets, comprehension reading worksheets, and creative writing worksheets were developed. A social studies and creative writing workbook, developed as a cultural unit entitled Heroes of the Americas and Héroes de las américas, were also written. For Level III a reading workbook entitled Diferentes animales del mundo was written along with comprehension reading worksheets and creative writing task cards.

In the area of social studies and culture there was very little available that was suitable to the needs of the curriculum. The teachers at each grade level developed cultural units of study, in the beginning concentrating mainly on the cultures of the United States and Mexico. These units are now being expanded to include other cultures such as the Philippines, blacks, etc. These units were written in lesson plan form and maintained in a notebook at each grade level.

Second language instruction in Spanish for native English speaking students was another area which needed to be developed. There were no sequentially structured materials available at the time. Such a program was needed because the students were not learning to use the language in a functional way. The English Oral Language Program by the Southwestern Cooperative Educational Laboratory, Inc., was being used in the English as a second language component

of the program and was very successful. It was a sequential and structured program. For these reasons, it was decided to translate and adapt it into Spanish for the students at Nestor School. At Level II beginning Spanish second language reading materials were also needed because of the use of a unique approach to the teaching of reading for the native English speakers learning to read in Spanish.

Several short story readers with controlled vocabulary were written. The vocabulary used in these stories was vocabulary and structures that the students had learned orally. Tell-Again Story Cards were translated and adapted as supplementary materials. Level III was able to use the Spanish Second Language strand of the materials developed by the Spanish Curriculum Development Center in Dade County, Florida, for reading and used picture worksheets for sentence construction and vocabulary expansion and writing. The cultural units were also dealt with in the student's second language in the form of charts to be detailed in the second language section. The charts contained facts that the students had already learned in their native language. These facts were then reviewed orally using structures previously learned.

A series of lessons at each grade level were written for the development of concepts in the second language in the areas of science, math, and social studies.

The staff had also been contacted by the Spanish Curriculum Development Center in Dade County, Florida, about

its materials and was interested in having them field tested. The Language Arts, Spanish Second Language, and Fine Arts strands were field tested among the four levels.

The Materials Acquisition Project in San Diego, California, whose purpose it is to assess and import Spanish materials from all over the Spanish speaking world, also contacted the Nestor project to see if some of their materials could be field tested. The staff agreed and was able to help evaluate these materials and adapt them to a curriculum relevant to the students in this program. There has also been involvement in the field testing of materials developed by the Curriculum Adaptation Network for Bilingual-Bicultural Education (CANBBE) of San Diego, California.

Everyone has benefited from the field testing of these materials. The staff and students at Nestor School have been exposed to a great variety of materials, some of which were adequate and some which were not. The developers of the materials have been given feedback on the adequacy and adaptability of their materials to students in this program. Suggestions for revisions have been provided them by the staff.

IV. EVALUATION

The evaluation program was one of the most difficult areas to develop in the bilingual-bicultural model. This was due in great part to the lack of adequate tests. There were very few standardized tests in Spanish which were

normed on Mexican-American students in the southwestern United States. The existing English tests were inappropriate not only because of the language, but because most had little cultural relevancy for the Mexican-American.

After careful screening, the staff began incorporating a few standardized tests, both English and Spanish, to be used at the appropriate grade levels. However, an even more important step was to incorporate into the evaluation system a diagnostic and prescriptive program to include criterion reference testing in most curriculum areas and a complete set of behavioral objectives and activities for all areas of student learning. This has been a process of development over the last six years. The use of specific learning activities and objectives to meet individual student needs was not initiated by the staff at Nestor School. Since this was an interdistrict endeavor, the project attempted to write objectives for each school. This was not possible since there were too many individual school needs and not yet enough experience in the field of bilingual-bicultural education. Consequently, the staff at Nestor began writing objectives and activities and gradually building on these. The activities were revised and refined as the curriculum took shape and student progress was evident. However, the staff was continuously investigating diagnostic and prescriptive programs which were becoming available. Unfortunately, these programs either included no Spanish activities or they were merely

adaptations of English language curriculum. In the process of development of the Nestor curriculum, many of these adaptations were discovered to be inappropriate in Spanish--specifically in the area of Spanish reading. Also, many systems of diagnostic prescriptive activities simply left out the entire area of second language learning, particularly Spanish as a second language. It was assumed that the student would follow the same activities in the second language as the first language, but at a different pace. We realized that a whole process of oral development had to precede any level comparable to the native language: e.g., a five year old English speaking student usually comes to school already understanding and speaking English. These understanding and speaking skills need to be further developed, but not at the level the Spanish speaker would begin. In the case of the English speaking student learning Spanish, this developmental process was even more critical since the acquisition of Spanish in an English speaking society requires not only a different process but an even more intense one: e.g., a longer, more comprehensive period of oral development and a reading process based on continued oral practice.

Some standardized testing needed to be incorporated into the evaluation design. However, there were very few tests found in the area of Spanish reading and achievement which had been normed on students in the southwestern United States. One test found was the Inter-American Series in

both English and Spanish from grades kindergarten through twelve. At first, this instrument seemed much too difficult for the Spanish speaking students; but as a result of the maintenance of the native language in the curriculum, the average class gains often exceeded the norms.

The State Cooperative Primary was used as a standardized test for the measurement of English reading skills, for English speakers from levels one through three and for Spanish speakers for levels two and three. Since the Spanish speaker's native language is developed first, he is usually not introduced to formal English reading before the second level, and is therefore not tested until then. The State Department of Education no longer administered the Cooperative Primary Test, and a new testing program was initiated. Although it was much improved, the individual and class scores were not retrievable for the evaluation. We therefore began using the Stanford Early School and Stanford Achievement tests used by the entire district. A list of all the instruments and the levels at which they are used follows this section.

Tests were also developed by the staff to measure specific curriculum objectives. These are usually referred to as criterion referenced tests. These were written for Spanish native language reading at levels one through three. As the original classes became third, fourth, and fifth grade students, these same criterion referenced tests were given to English speaking students in those grades to

measure their development of Spanish reading skills.

The criterion tests were written not only to measure student progress, but to also help build the Spanish Language Arts curriculum by finding the extent of material needed for each level: e.g., it was found that the second level test was too simple for several classes having taken it, and therefore an amplification of this test was needed.

In the area of self-concept development and cultural awareness, only specific objectives were measured as determined by the staff. No specific instruments were incorporated into the evaluation program. The judgment of the staff was that these instruments could not adequately measure as abstract a phenomenon as cultural awareness or self-concept. Staff observation has been the process for attempting to assess progress in these areas. Although this is not adequate for empirical evidence, it is far better than testing students for testing's sake.

The staff has continuously sought to improve the evaluation of the program by achieving a system which seeks to measure individual behavior so that the teacher may be better able to prescribe the correct learning experience to meet each student's needs.

The Southwest Research Associates has helped in the evaluation design and analysis for the last two years. They assisted the staff in developing this process evaluation and in becoming more independent in handling an evaluation program.

The following section presents a typical design for the program's evaluation as it may have appeared in an evaluation report.

Evaluation Design

This evaluation design will concern itself with the instructional program being implemented at Nestor Elementary School in South Bay Union School District, San Diego, California, as part of ESEA Title VII Project Frontier. Assessment will be directed to those activities and objectives which are being used at Nestor Elementary School and are essentially confined to curriculum assessment.

Program Summary

The program at Nestor School concentrates on providing instruction for children in grades kindergarten through six. Approximately half of the children in the program are native Spanish speakers, and the remainder are native English speakers. The program is designed to develop listening, speaking, reading, and writing skills in both Spanish and English for all participating students. Additionally, the program seeks to improve students' academic achievement in the areas of math, science, and social studies by providing initial instruction in the students' native language.

South Bay Elementary School District
Nestor Elementary School

Goal: 2.0 Spanish Language Development
(Spanish as a first and second language)

(Sample)

Objective	Evaluation - Specification	Activities	Person(s) Responsible
Develops Spanish language skills. 80% of Spanish-speaking students will demonstrate mastery of Spanish language skills in the areas of listening, speaking, reading and writing. Sample Given instruction in the Spanish sound/symbol correspondence of the consonants m, p, s, l, and pl, the students will be able to identify and pronounce these consonants when read in a meaningful context. 80% of English-speaking students will demonstrate mastery of Spanish language skills in the areas of listening and speaking appropriate to the Spanish as a second language curriculum. Sample The English-speaking students will be able to read 80% of words found on pages in the text of "La oveja que queria una casa," and answer 70% of the comprehension questions asked about the story.	Pre and Post Appel Readiness (Spanish for kindergarten). Teacher checklist of objectives (K-6). Pre and Post Criterion reference reading tests developed by staff (K-3). Pre and Post Test Inter-American Series standardized Spanish test of reading (2-4). Pre and Post Criterion Reference Oral Tests developed by staff (K-2). Teacher checklist of objectives (K-2). Pre and Post Spanish Criterion Reference Reading Tests developed by staff. Level I for grade 3, level II for grade 4, and level III for grade 5.	1. Time schedule of language learning blocks. 2. Conduct field trip experiences throughout the school year. 3. Two adjacent classrooms with thirty (30) children per classroom--15 dominant Spanish speakers and 15 dominant English speakers. 4. Individualized instruction in most areas, especially in the areas of reading and math. 5. Cross-age tutors and parent volunteers. 6. Student teachers and university students. 7. Center oriented classroom with special consideration to their use as vehicles for spontaneous use of the second language. 8. Use of the inquiry approach for development of critical thinking.	Verified by teachers and resource teacher. Verified by program plan for field trips. Resource teachers interview for language dominance and placement of students verified by teacher observation. Resource teacher observation and teacher observation, class records.

Figure 2

Instructional Program

South Bay Elementary School District
Nestor Elementary School

Goal: 1.0 English Language Development
(English as a first and second language) (Sample)

Objective	Evaluation Specification	Activities	Person(s) Responsible
Develops English language skills. 80% of English-speaking students will demonstrate mastery of English language skills in the areas of listening, speaking, reading and writing. Sample Given a long vowel orally and a written list of words one of which contains the long vowel sound, the student will mark the correct word.	Pre and Post Appel Readiness Test for Kindergarten. Teacher checklist of objectives K-6. California State mandated reading test (1-3)	Instructional Organization Listed activities apply to all program goals. 1. Team Teaching Two teachers, one bilingual Mexican-American teacher fluent in both English and Spanish and representative of the Mexican-American culture; and a fluent English-speaking teacher representative of the Anglo-American culture.	Language screening, resource teacher, principal, community representatives.
80% of Spanish-speaking will demonstrate mastery of English language skills in the areas of listening and speaking appropriate to the English as a second language curriculum. Sample Spanish-speaking kindergarten students will be able to ask and/or respond using the structures listed below: Asking Where's the spoon? Answering It's in the box.	Pre and Post Oral production tests of the Oral Language Program for English as a second language (K-2). California State mandated reading test grade 2. Teacher checklist of objectives (K-6).	2. Resource teacher--a bilingual teacher who coordinates the total program activities and reviews and distributes new materials. 3. Refine checklist of objectives for each child.	Building principal's evaluation yearly. Analyzed and monitored by resource teacher throughout the school year. Assessment verified by evaluation team.

Figure 3

Instructional Program

South Bay Elementary School District
Nestor Elementary School

Goal: 4.0 Improves Academic Achievement (Sample)

Objective	Evaluation Specification	Activities	Person(s) Responsible
Improves academic achievement. 80% of English-speaking students will demonstrate mastery of skills in the areas of math, science and social studies appropriate for each level. Sample Given various objects such as potatoes and spherical objects, 90% of the students will be able to identify and name at least one variation and one similarity among the objects. 80% of Spanish-speaking students will demonstrate mastery of skills in the areas of math and science appropriate to either the English as a second language or Spanish as a second language curriculum. Sample Given crayons of different sizes and colors, 75% of the Spanish-speaking first grade students will be able to ask in English: "What is the same?" and respond, "They are all red." (yellow or blue, etc.) "They are all big."	Teacher checklist of objectives (K-6).	Ongoing inservice programs would include many of the areas listed in pre-service activities as well as: 1. Weekly lesson and materials development planning by team teachers with resource teacher. 2. Weekly writing of performance objectives. 3. Discussion of evaluation techniques and procedures. 4. Visitations. 5. Professional growth classes offered through local universities. 6. Involvement in school/community activities. 7. Individualization of instruction. 8. Learning centers. 9. Use of teaching strategies for critical thinking.	Ongoing inservice: 1. Resource teacher, monthly teacher behavior checklist for second language. 2. Resource teacher classroom observation. 3. Schedule of meetings, inservices and planning sessions in writing (resource teacher) 4. Resource teacher monitoring weekly planning sessions and material development. 5. Resource teacher development and refinement of behavioral objectives. 6. Attendance at school/community activities.

Figure 4
Instructional Program

Program Objectives and Instrumentation

Specific activities designed to lead to completion of these objectives are listed in the ESEA Title VII Bilingual Education Project Performance Objectives. Program objectives and activities were rewritten and the sixth grade level added. Objectives were listed in sequence, and stated in a measurable manner. Objectives and activities were listed by grade level, language category, and subject areas on class check sheets to enable the teacher to record the progress of the pupils. A diagnostic prescriptive system has been developed whereby these checklists were placed in each student's cumulative folder to be continued by the next teacher at each individual student's learning level. Each objective was stated so that success was judged by 80 percent of the students reaching completion on at least 80 percent of the activities. These have been coded and summarized in a series of teacher-administered checklists. The following is a sample of these objectives and activities with reference to Spanish and English language development and academic achievement.

Conceptual Framework

Assessment of specific instructional activities and objectives will be determined through use of checklists. Assessment of overall general objectives will be made using the following instruments:

APELL Test: given in the native language, tests

listening comprehension, reading comprehension, and pre-math skills at kindergarten level (pre and post testing).

SWCEL Test of Oral English Production: given to all Spanish speaking project students, tests English language listening and speaking ability for Spanish speakers (pre and post testing).

Inter-American Series (I.A.S.): given in Spanish; tests Spanish language reading and math achievement for Spanish speakers; Levels I, II, and III (pre and post testing.

Criterion-Reference Reading Test (project developed): a Spanish language reading achievement test; given to native Spanish speaking students; Levels I, II, and III (pre and post testing).

Test of Language Dominance (TOLD): given in Spanish and English, tests bilingual ability for Spanish and English speakers (post test only).

Stanford Achievement Tests: English language reading, math and language test given pre and post to English speaking students grades kindergarten through six and Spanish speaking students grades two through six.

Not until the third year of the project was the staff able to begin asking specific questions. As the effectiveness of the program became evident, the staff, with the help of the evaluation assistant, were able to identify the major elements of the program to substantiate their effectiveness.

Evaluation Questions 1972-1973

1. Are there differences in the progress of the first class to participate in the program (kindergarten and first grade in 1969-1970) and the following classes?

2. What is the effect of the maintenance of the native language (Spanish) on overall achievement in comparison to a control group which has not maintained their native language instruction?

3. What reading skills are developed at various primary grade levels by Spanish speakers participating in the Title VII program?

4. What is the relationship between reading placement and oral language skills for native Spanish speakers and native English speakers at different grade levels?

5. What has been the effect of the program on English speakers as compared to English speakers not in the program?

6. Are students participating in the program more bilingual than similar students not participating in the program?

7. How is the teacher-training and inservice component of the Oral Language Program (OLP) being maintained for new teachers being brought into the program? Who is providing such training and is there any monitoring of OLP teacher behavior? What is being done to insure maximum and continued effectiveness of the program?

8. How effectively is the Spanish adaptation of the OLP being implemented? What could be done to improve its effectiveness?

Evaluation Questions 1973-1974

In addition to the principal question of whether or not instructional objectives are being met, this evaluation hopes to provide answers to a number of additional questions. These are listed below.

1. Are there differences in the progress of the first class to participate in the program (kindergarten and first grades in 1969-1970) and the following classes?

2. What has been the effect of the program on English speakers as compared to English speakers not in the program?

3. Are students in the program becoming progressively more bilingual?

4. For Spanish speaking students having been in the program from the beginning, what is the level of achievement in English, oral and reading, by third, fourth, and fifth grade levels?

5. How are the Spanish speaking students achieving in Spanish reading by levels?

A general summary of findings will be presented in Chapter 4. This will include conditions under which the instruments previously described were administered, and the results. Many of these results will be presented in the

framework of answering some of the above questions.

V. COMMUNITY

Community Involvement

A community involvement program is a process that develops gradually, beginning with community awareness and student selection. This evolves into parent participation as resources and classroom volunteers. Eventually formal parent education and direct participation in the decision making process takes place. This process will be described in depth.

Lines of Communication

The lines of communications between the school and the community have been kept open in several ways. Parent conferences were held to keep the community informed about the progress of their children and any other happenings at school which were of importance to them. The conferences were always conducted in the native language of the parents. This proved to be a good way of getting the parents to come to school and also to get their cooperation.

Home visits proved to be an even more effective way of communicating with parents. By meeting the parents in their homes, the visit was more relaxed and comfortable. These visits allowed the teachers to see the environment of the home, and this helped them to understand the student better. By seeing the child in his environment outside of

school, the teacher was better able to understand the child's behavior and attitude toward school and life. Home visits also served as conferences whenever the parents were unable to come to school.

The coordinator of the program made home visits when screening new students for the program. Home visits served to acquaint the parents with the program and gave them the opportunity to ask any questions they may have had. There seemed to be a better rapport between teachers and parents after home visits. The parents were more willing to come to school after meeting the teachers in their homes. During home visits the teachers were able to recruit parent volunteers for their classrooms.

Meetings

Rather than continuous formal meetings, the evening parent meetings centered around cultural holidays as themes. They were programmed around the children's active participation, as in culturally oriented dances and plays. These meetings provided an opportunity to inform the community of the most recent developments in the local bilingual program. The languages were alternated from the podium so that all may understand, or a system of headsets might be set up to provide spontaneous translations.

Parent meetings during the day began taking place to provide the parents an opportunity to observe the school in action. These meetings were oriented to classroom

visitations, followed by a luncheon for the parents and teachers. Other social programs included potluck dinners and field trips. Some parent gatherings took place in the homes of members of the community. These smaller meetings facilitated more spontaneous communication. Multiple meetings were scheduled to provide an opportunity for all to participate. These always included parents, teachers, and instructional aides.

Decision Making

As the bilingual-bicultural program developed, the main goal for the community program was to achieve the ability for decision making and participation among the parent group. An outgrowth of the above activities was the formation of a parent advisory committee. This group consisted of individuals who had long been involved and knew the program well. Each year officers were elected by the parents in general. The advisory committee then began meeting regularly. These meetings were planned and conducted by the parent officers. The program coordinator, principal, and community aide worked closely with these parents in all aspects of the community program.

Some of the functions of the advisory committee were to plan and conduct all parent activities such as business meetings and socials. This group also assisted the staff in student cultural programs presented to the parents. During meetings the advisory group continuously

assessed program needs and helped inform new parents about the bilingual program. They decided upon plans for informing the administration and the school board about its support of the program. Other functions were to assist in the planning and coordination of a parent volunteer program, to decide upon the budgeting and expenditure of the community funds, and to consistently visit the classrooms and the coordinator so as to keep well informed of the progress of the program. The goal of actual decision making is still to be achieved; however, much progress has been made toward this goal.

Community Aide

The community aide became an essential person in the program. This individual helped tap the resources in the community for the benefit of the school by visiting the home and making appointments for meetings of parents and teachers in private homes. The aide conducted interviews of new students to the program. Individual problems of students were also looked into immediately by this person.

Parent Volunteers

As another development of community involvement in the bilingual program, parents were invited to come into the various classrooms to help with small group instruction in order to lower the pupil-teacher ratio. A center oriented classroom was particularly adapted for the use of parental assistance. A parent was assigned to a center that allowed

him or her to use their talents or express their particular interest. The presence of an adult with whom to communicate and who could offer immediate reassurance and support proved very valuable for students. Parents were also afforded the opportunity to become intimately involved in their child's learning experiences and were able to see him function in relation to his peers. Instructional aides as well as parent volunteers have been resources found in the community. These individuals were persons with special abilities such as music, dancing, carpentry, mechanical, and clerical experience.

Parent Education

The parent education program evolved to include more than group meetings for informing parents on general matters. A class in which native English speaking parents learning Spanish as a second language was formed and well attended. It was geared to the types of structures and vocabulary that the children were learning in their classes, as well as presenting parents with information and experiences on the second culture. The positive attitude shown to the children by the parents attending this class was invaluable, as was the status Spanish gained through the approval of the parents. Parents attending the Spanish class presented simple plays for the children such as "Caperucita Roja."

Because of the availability of English as a second language classes for native Spanish speaking parents through

local high schools, no attempt was made to begin additional English classes. However, information on these classes was provided to parents, and many attended.

As the parent volunteer program progressed, training for parent volunteers also became a part of the parent education program. And, in order to get a more active participation from mothers with small children, especially from Mexican-American families, a preschool was started to provide care for children whose mothers donate a minimum of one hour a week working in the classrooms. The preschool was sponsored by the local adult school as long as the program maintained a minimum of fifteen volunteers per day at Nestor School.

Finally, Mexican-American mothers began requesting literacy classes for themselves in Spanish so that they would be better prepared to assist in the classrooms and their own children at home. This class was initiated and conducted weekly.

Many of the activities previously described helped build the necessary skills and self-confidence among the parents so that more involvement was taking place. More and more parents are making their voices heard and thereby influencing many decisions.

Chapter 4

FINDINGS

INTRODUCTION

In the design of this study Chapter 3 has served to define the process model for the total program, its development and organization. In terms of Chapter 4, primary effort has been placed in developing a process model for each of four curricular strands: native language, second language, concept development, and cultural awareness. Each strand will include a rationale for its development, methodologies, and instructional strategies to achieve the strand objectives, as well as examples of curriculum materials used. Secondary effort has been placed in the findings which serve to support the process model.

NATIVE LANGUAGE STRAND

The native language of a child is his dominant language. It is usually the language of the home and of the person with whom the child spends most of his time. Native language development is the process of assessing the language a child uses at home and of developing and extending it.

A child acquires certain basic skills before he

enters school. For example, he is able to listen, speak, and comprehend his native language and has developed many social skills relevant to his culture. This strand touches on the role of language and thinking and goes into specific ways of developing and maintaining a child's native language. It deals primarily with curriculum for the development of the Spanish language in the elementary grades and the reasons for establishing a firm basis in Spanish for the native Spanish speaker.

According to the literature, there is much evidence to support the fact that learning is best done in the child's native language, and that, in fact, language is a tool for cognitive development. Studies have also shown that a child with a well developed native language is able to learn a second language more quickly and easily.

Because of these findings and the staff's own observations of children, the development of the program at Nestor School had as one of its major premises the development of a strong Spanish as a native language strand. As the program focused on the development of coordinate bilingualism, it was developed to be a maintenance program encompassing grades kindergarten through six. The native language would continue to be developed throughout the grades.

A kindergarten through grade one program was developed the first year at Nestor School. It was felt that a slow and concentrated effort one grade level at a time would

yield a more comprehensive and quality program. Because of research studies which had been conducted and the observations of the staff, it became apparent that a child who had strong language development in his mother tongue became a better student and was able to learn a second language more quickly and more proficiently than a child who was submerged in a second language without the opportunity to get a hold on his native language without interference from a second language. A child brings many skills and abilities with him as he enters the classroom. In fact, Piaget's (1959:18) research indicates that a child accumulates his greatest fund to knowledge in the years before he enters school. He points out that linguistically:

> The average child has mastered most of the distinctive sounds of his first language before he is 3 years old and he controls most of its basic grammatical patterns before he is 5 or 6. The development of these abilities must continue in the child's native language. (Piaget, 1959:18).

When a native Spanish speaking child enters school and is totally immersed in a language he does not understand or cannot command orally, the conceptual fund of ideas and facts he has accumulated up to this time cannot serve him in the school setting. His energies are directed to learning the labels for things in the new language rather than to the development, expansion, and utilization of the conceptual framework which he has developed to that point.

The interference a child experiences in the development of his ideas, concepts, and thinking skills

later retards his progress in the reading process as well as all other areas of his educational experience.

An analysis of the types of failure of Mexican-American students in the reading process will show that while many of these children are able to learn the decoding skills taught to them in the primary grades, kindergarten through two, failure begins to set in when the emphasis of the reading process changes from decoding to the comprehension of what is decoded. Since reading is, as Eleanor Thonis (1970:13) points out, only "speech in print" and its main purpose is the transmission of ideas, the importance of a strong conceptual framework and the ability to process these ideas is of major importance.

Children's cognitive processes have not developed along with the learning of the decoding process in reading. Therefore, when the emphasis in reading changes to comprehension, the fund of knowledge which would enable them to use the information being decoded is lacking.

Mexican-American children who entered the Nestor bilingual program came to school with many varied levels of language--from the child who spoke only Spanish to the child with a very mixed dominance, or very little ability to communicate in either language. No formal linguistic test was given in placing children either in the Spanish component or in the English component. It was felt that often children are placed in English because of the importance of English in this society, and that a simple linguistic ability in

English did not constitute a good criterion for such placement. Rather, it was felt that the conceptual and affective base the child had experienced during his first years of learning was a more important factor than mere ability with the language, unless English was clearly dominant. Therefore, children were interviewed by the resource teacher and a home visit was made. If the child used the languages interchangeably or equally well and the language spoken at home to him by his mother was Spanish, he was placed in the Spanish component. Teacher observation confirmed the placement. Aside from the link of the Spanish language to his early conceptual development, Spanish is a much easier language to learn to read and write and therefore offers the child a greater opportunity for success. Many children at a second or third grade level who were failing in an all-English class were also sent to the Nestor bilingual program. In these cases students were put in the Spanish component and English reading was dropped until the student had a firm basis in literacy in his native language.

Again a commitment such as that demonstrated by giving Spanish priority was continued in planning for the development of the Spanish language. Because of the many children experiencing language interference, it was observed that a teacher's indiscriminate use of two languages only served to reinforce the mixed dominance of these children. Therefore, the importance of a clear and distinct separation of the two languages through the scheduling of distinct

language time blocks was evident.

Additionally, it was felt that if a child could physically identify a language with a person and an environment he would begin to develop an added awareness of the distinctness of these two languages and would receive a visual as well as an oral clue to cue him. Thus, a team teaching approach was selected in which one of the teachers assumed the role of the Spanish model and the other the role of the English model.

Not only did this arrangement serve to separate the languages, but the development of two equal environments with two equal power figures established an equal status for the Spanish language. The creation of this status was found to be a very significant factor, as the Spanish language does not naturally enjoy this status or prestige in this society. The interaction of these teams has been observed to present a very valuable model of positive cultural interaction.

Aside from the environmental considerations, a felt need existed in the original planning staff that a clear definition of goals was important if the entire staff was to work toward a common end. A philosophy was slowly developed which included very basic premises for each of the strands. The following basic premises were identified for the native language strand. These have been carefully followed in the development and implementation of the native language program:

1. All lessons should be conducted entirely in Spanish. There would be no mixing of language by any teacher during any given lesson period.

2. Learning activities should proceed from listening and speaking to reading and then writing, the natural progression of language acquisition.

3. No simultaneous reading of English and Spanish at the readiness or first level should be attempted. Because of the differences in the sound systems, much confusion was observed in children trying to master both sound systems at once.

4. The teaching of reading to the Spanish speaker must be approached in a different way than native language reading for the Spanish speaker. The native English speaker is limited in his comprehension and facility with the second language.

5. Beginning reading for the native speaker in Spanish uses a phonetic approach beginning with the vowels. The Spanish sound system is very regular and predictable.

6. Consonants are introduced by sound rather than by name, since the sound of the consonant is what will be used in decoding.

7. Vocabulary was to be controlled by sequence of sounds introduced rather than by sight words. Each consonant is presented one at a time and mixed with the vowels to be read in words--no consonant not formally introduced is used in the words read by students.

8. Direct translations are avoided. Translations should be as native as possible.

9. Instructional aides for small group instruction should be used to reduce the pupil-teacher ratio.

10. A positive approach should be used by all staff members to elevate the status of the Spanish language. Team-teaching is a very effective method of achieving a balance of language and culture.

11. Pride, a positive self-concept, and self-reliance should be instilled in the student.

In addition, some of the major strategies or approaches to achieving the language development objectives for the program have been adopted and developed. Some of these strategies were:

1. Team teaching, which, as has been previously explained, created an environment reflecting status for the Spanish language within the English educational system. This was done by two separate language environments and four distinct linguistic models.

2. Individualized instruction, especially at the beginning levels of reading, which provided each child with a one-to-one contact for monitoring his progress in skills development.

3. Cross-age tutors who provided children with peer models to whom they could relate on a less stressful level than perhaps is possible with adults. The use of tutors also allowed the monitoring of children's progress in

learning centers.

4. A center oriented classroom providing children with a variety of experiences and a variety of possibilities for success as well as the development of self-direction.

5. An inquiry approach to the development of critical thinking skills in children for evaluation and interpretation of written as well as oral data.

6. A phonetic approach to the learning of reading in the Spanish language, as the most efficient and easiest system for children to learn providing for the maximum potential success for each child.

7. Small group learning which allowed the formation of ever changing skill groups.

8. Language experience reading which provided children the opportunity to see their ideas and experiences as important and worthy.

The major objectives for the native language strand were: developmental readiness, reading, oral language development, fluency, comprehension, information gathering and processing, inferencing, vocabulary development, writing, grammar, and spelling.

Following the natural sequence of language learning--listening, speaking, reading, and writing--a curriculum was developed for the first levels which would provide many listening and speaking activities. It was observed that many "bilingual" children come to school with very little development in either language. Therefore, the kindergarten

level focused on developing these oral language skills. Kindergarten also concerned itself with the learning of the five vowel sounds in Spanish. Since they are always constant, they form the basis for the reading of Spanish.

The first level continued to work with oral language development as the formal reading process began. The vowels were reviewed and then each consonant was presented--one at a time--in a prescribed sequence (m, p, s, l, t, d, r, c, n, f, etc.)

Each letter was presented by sound only to avoid the confusion between a letter's name and its actual sound in a word. Each letter was presented in isolation and always in the initial position. For example, la mmmm--¿Qué cosas comienzan con mmmm? Children are then asked to listen to words that begin with this sound.

The writing of the letters was done simultaneously after decoding and comprehension skills were developed, creative writing was initiated, and children were encouraged to write their thoughts freely without emphasis on spelling skills.

The second level continued to develop listening and speaking skills through an emphasis on verbalizing a complete thought rather than the use of one word answers, as well as recalling information and exploring cause and effect relationships related to stories heard or read.

Spelling became an important area of emphasis, especially focusing on the more difficult consonants such

as "ll", "rr", "h", and combinations such as "gue", "qu", and the blends. Dictation was used to practice spelling rules. Writing extended to the composition of simple sentences and simple punctuation was practiced.

The third level continued the emphasis on comprehension. There was a great lack of materials appropriate to students at this level. Therefore, social studies readers were written to go along with units of study such as animals, Mexico, and the Indians of the Southwest. Each reader covered material which had been discussed orally, and comprehension questions were provided at the end of each section.

A main focus was on grammar. Lengua Española 3 was used, assignments were written on charts, and the vocabulary was adopted to these particular students. The use of this book has provided a sequenced order for grammar study.

Creative writing continued to be encouraged. Students were provided with task cards of increasing difficulty. Spelling refinement continued.

Behavioral Objectives

The following sample behavioral objectives have been selected from the project evaluation objectives and show a sequential development of major skills through the levels. They have been organized under four main areas: listening, speaking, reading, and writing.

Following the objectives for each area are sample

lesson plans which give methodologies for implementing these objectives.

Listening

Readiness Level: After hearing a series of descriptive phrases, the learner will draw simple pictures that illustrate the descriptive phrase. Given a word orally that begins with a vowel and a set of vowel cards, children will be able to show the correct beginning vowel.

Level 1: Given a story whose conclusion is missing, the student will draw a picture illustrating an ending based on the contents of the story and orally justify his choice. Orally given a list of words beginning with different letter sounds and instructed to listen for words with a particular beginning sound, the child will be able to clap whenever he hears the correct beginning sound.

Level 2: With his eyes closed, the learner will listen to five different classroom sounds and identify at least four on paper.

Level 3: The third level students will be able to retell in the native language and in their own words a complete story previously heard on head phones.

Speaking

Readiness Level: Given a picture to look at, the learner will tell how it makes him feel. Shown a capital and lower case printed vowel, the child will be able to name some things that begin with the vowel.

Level 1: Given a picture or a story, the learner will orally be able to identify a cause or an effect in a cause-effect relationship and support his statement. After listening to a story, the child will state whether it is a fact or fantasy and be able to cite at least one reason to support his position.

Level 2: Given an involved action picture, the learner will orally answer the following question: ¿Qué ha pasado? and describe the activities that lead up to the action in the picture.

Level 3: The learner will be able to give an oral report about a library book he has read.

Reading

Readiness Level: Given pictures of objects beginning with the vowel sounds, the student will name the objects and say the beginning vowel sound. Given pictures of objects with the vowel sounds, the student will listen to the sound and be able to discriminate between them.

Level 1: Given instruction in the Spanish sound/symbol correspondence of the vowels and consonants, the students will be able to identify and pronounce these consonants when read in a meaningful context. Given five sentences, each with a missing word and list of five words, children will be able to choose the correct word to complete the sentence and write it in the space provided.

Level 2: Given three pictures, three sentences, and

eight questions, the learner will observe the pictures, read the sentences, and answer six of the eight questions accurately.

Level 3: The learner will distinguish between feminine and masculine, singular and plural, proper and common nouns by supplying the correct item where left out, or by writing new sentences having these differences, on appropriate worksheets.

Writing

Readiness Level: Given a sheet of lined paper and pencil, the learner will write in upper and lower case and with correct spacing and size those vowels which he has learned to identify orally.

Level 1: The learner will be able to compose an original story that includes a title and one to three sentences.

Level 2: Given a noun, a verb, and an adjective and the written instruction to write a sentence with each word, the learner will be able to write a simple sentence with each word.

Level 3: The student will be able to write a short story in the native language, at least five lines, using correct capitalization and punctuation, and in manuscript form. The student will be able to write a short report about a library book, recalling the author, title, and story in sequence.

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Readiness

Subject: Native Language Listening

Title: _____

MATERIAL

A set of vowel cards for each child in group approximately 3 x 5 in size.
List of words beginning with vowels.

OBJECTIVES

Given a word orally that begins with a vowel and a set of vowel cards, the learner will be able to hold up the vowel card which corresponds to the initial vowel heard in the word.

PROCEDURE

Hand out set of vowel cards to each child. The teacher will pronounce a word which begins with one of the vowel sounds. After hearing the word, the child will hold up the vowel which represents the initial sound he heard.

Figure 5

Native Language Listening

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: First

Subject: Listening Native Language

Title: Auditory Discrimination

MATERIAL

None.

OBJECTIVES

Orally given a list of words beginning with different letter sounds, and instructed to listen for words with a particular beginning sound, the child will be able to clap whenever he hears the correct beginning sound.

PROCEDURE

Instruct the children as to the beginning sound they are to listen for, i.e., "M".
Say a list of words, preferably nouns that are known to the children. Every time they hear the initial sound they are to clap. Teacher should emphasize the initial sound as it is spoken.

Hint: Make sure children understand the meaning of "beginning sound."

Figure 6

Native Language Listening

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Readiness

Subject: Speaking

Title: Native Language

MATERIAL

Vowel charts or worksheet with lower and upper case letter and four pictures of things that begin with the vowel.

A	a

OBJECTIVES

Shown a capital and lower case manuscript vowel and told the sound of the letter, child will be able to name other things that begin with the same sound.

PROCEDURE

Hold up chart (or worksheet).
Tell children the name of the vowel and have them trace the letters either on the chart, or worksheet, or in the air.
Identify the objects on the chart emphasizing their initial sound.
Ask children to name other things that they know that begin with the same.
If children need help offer clues about objects, i.e., a description "se usa para. . . ."

Figure 7

Native Language Speaking

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: First

Subject: Native Language Speaking

Title: "Pollito Pito"

MATERIAL

Story of "Pollito Pito."

OBJECTIVES

Given a picture or a story, the learner will be able to orally identify a cause or an effect in a cause-effect relationship and support his statement.

PROCEDURE

After listening to the story, children will be able to retell the story in order, then tell why Pollito Pito acted as he did.

Figure 8

Native Language Speaking

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: Second of four levels of interpretation

Grade Level: Second

Subject: Speaking

Title: Native Language Picture Interpretation

MATERIAL

Peabody Picture Cards from Language Development Kit Level I. Story Card 3, Fire Scene--The Rescue of the Injured Boy.

OBJECTIVES

Given an involved action picture and a discussion, the learner will orally answer the following question: ¿Qué ha pasado? and describe the activities that lead up to the action in the picture.

PROCEDURE

1. Display the picture. Encourage them to study the picture for important clues.
2. Ask the group to enumerate as many of the objects that they see in the picture. Each child may volunteer an oral answer.
3. Ask the group to describe in present terms what is happening. Volunteers may describe the actions preferably in sentences. ¿Qué está pasando?
4. Ask the children to describe what has happened. Volunteers will describe the actions that took place before the picture was taken. ¿Qué ha pasado? ¿Qué le ha pasado al _____?
5. After the oral discussion, write the names of the main characters, and assign the children to complete and answer the question ¿Qué le ha pasado al _____?

Figure 9

Native Language Speaking

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: One day

Grade Level: Third

Subject: Speaking Native Language

Title: Oral Book Reports

MATERIAL

Library book.

OBJECTIVES

Give an oral report about a library book. The third level students will be able to give an oral report about a library book.

PROCEDURE

1. Have children check out library books.
2. On an assigned day the child will be called upon individually to give an oral report.
3. They should tell the name of the book and the author.
4. They should speak loud enough to be heard by everyone, and clearly.

Figure 10

Native Language Speaking

SECOND LANGUAGE STRAND

The information here presents the interpretations and developments of certain decisions made in the evolution of the curriculum concerning second language. It focuses on a process description of the following:

1. Development of the second language program for Spanish as a second language as well as English as a second language.
2. The development of vocabulary.
3. The development of reading in the second language.
4. The development of writing skills for the second language.
5. Activities for the motivation of spontaneous speech.
6. Grade level goals.
7. Sample lessons.
8. Strategies: team teaching; bilingual instructional aides; pantomiming, role playing, and dramatizations; activity-oriented centers as they affect motivation; story-telling; mechanical equipment; and small group instruction.
9. Techniques: modeling, evoking questions, reinforcement, correction of errors, and backward buildup.
10. Time periods.

At the inception of the bilingual program at Nestor School, it was understood by all that a second language

program was necessary. An English as a second language program seemed the most obvious for those students who did not speak English. However, the idea that a Spanish as a second language program be taught for those who did not speak Spanish seemed novel to many. It was then accepted by the staff that the prime objective of the bilingual program was to promote coordinate bilingualism for all students: "For both social and academic reasons (bilingual) programs should include native English-speaking students learning a second language, such as Spanish." (Saville, 1972:331). It was further agreed that both second language programs would need a gradual and organized development of each language.

The development of the second language program began by reviewing those materials commercially available. It was observed that much of the materials were geared toward older students. Previously, some had not considered it desirable to teach young children a second language, although others believe (Troike, 1972:309; Mackey, 1967:120; Pennfield, in Mackey, 1967) that the optimum age for learning a second language is between the ages of five and eight. As the search continued, it was agreed that the objectives in some second language programs were too broad; there was often little continuity and little reinforcement. Many of the programs were concerned with only language lessons and little or no concept development. The vocabulary used in many programs seemed limited.

After some time a program for English as a second

language was found that attempted to develop more than a few amenities and a scattered vocabulary. The English Oral Language Program developed by the Southwestern Cooperative Educational Laboratory (SWCEL) was adopted for use in the Nestor program. This program provided a series of lessons which gave the student usage of structures in differing tenses, developed the use of different voices or persons, and the ability to ask and answer questions.

The Spanish as a second language program was not as fortunate to find a ready-made program. At this point some of the teachers decided they needed a program for the Spanish as a second language curriculum as well organized as the Oral Language Program developed by SWCEL. With the permission of the Southwest Regional Laboratories, a Spanish program was written similar in philosophy to the English Oral Language Program. Each teacher was given one level to develop. The other teachers then reviewed each section and critiqued them until all were satisfied. The following is a list of the important elements incorporated into the second language program:

1. "Teaching should be one step at a time, each step related sequentially to other steps, and each small enough to insure success on the part of the learner." (Wilson, 1969:6).

2. "If learning is effectively to transfer then the situation to which it is to transfer must be real to the learner." (Symonds, 1964:89).

3. "Language learning means acquiring the ability to ask and answer questions, to make statements, and to produce authentic forms by native speakers." (Finnochiaro, 1965:13).

4. Emphasis is made in teaching structures instead of grammatical rules:

> Native speakers are not conscious of each sound or word they say or of the sequence of the sounds or words. They are conscious primarily of the ideas or thought they are trying to convey. (Finnochiaro, 1965:11).

5. "Teaching language through speech is more efficient than teaching through writing." (Wilson, 1969:6).

The development of vocabulary seemed to be limited by the repetition found in many language programs. By organizing the sequence, different groups of words have been used at each grade level, thus extending and developing a wider vocabulary. Language involves four basic processes: ordering, substitution, deletion, and expansion. By using different vocabulary words reinforcement of structures has been made without being repetitious. "The most basic thing that can be said about human memory is that unless detail is placed into structural pattern, it is rapidly forgotten." (Bruner, 1960:24).

The development of reading in the second language brought about the following considerations. The English and Spanish languages contain almost all the same letters but different sound systems. The teaching of reading to the native speakers of each language has been developed as two

different methods. Since the second language learner still had a limited command of the second language, the teaching of reading in the second language has not been developed in the same manner as that employed in the native language. Emphasis has been placed in the continued development of the oral language. The natural progression of language acquisition has been employed to insure that no confusion took place. All language activities proceeded from listening and speaking, to reading and then writing.

The process considered the most suitable for teaching the second language learner is through a series of oral lessons that preceded the reading lessons. This method would insure that the learner would have the necessary vocabulary to carry out the complete reading process, and not merely decode letters without understanding words. These oral lessons have been based on the vocabulary found in the reading and taught through techniques of role playing, pantomiming, and the use of pictures.

The oral lessons were taught completely in the second language. After the students had learned the oral lessons they were introduced to the written words, individually, on flash cards. We began by introducing nouns, matching to the pictures, if necessary, for understanding. Each word was modeled for the correct pronunciation. The cards were covered so as to show one syllable at a time. Each syllable was pronounced as it reappeared. Flash card games were played to insure familiarity with pronunciation

and understanding of words. The pocket chart was used to organize words into sentences. Each learner was asked to read one or more sentences from the pocket chart. Each learner was asked questions in such a way that the learner could answer from the structures found in the text or in his own vocabulary. Each child was given the opportunity to read individually the complete text of the story to test his pronunciation and comprehension. This process was repeated with a variety of stories as it was intended to provide experiences and success to the second language learner.

The process of writing followed at the next level. The children were then taught the names of the letters through the use of oral drills. Once they knew the names of the letters they were able to start writing words in oral drills using pictures. If the learner did not know how to spell a word, it would be spelled orally for him. As this continued, the drills were developed into simple sentences.

Vocabulary words are then introduced, accompanied by pictures. The students were asked to make up oral sentences as a group. Individually, each learner copied the five vocabulary words from the board and wrote a simple sentence with each word, i.e., "Esta es una manzana" and "La manzana es roja."

After two or three weeks the students became proficient in writing simple sentences. The vocabulary was then increased. The students would again make up the oral sentences while the teacher would write on the board in a

scrambled order all of these words. Individually, the students were to reorder and write sentences given the vocabulary and pictures. This activity was limited to five sentences for three or four weeks and later increased to ten sentences.

After Christmas vacation the students were introduced to answering questions about a picture. Five questions were first written on the board. The students were then asked to give oral answers. The vocabulary words necessary were then written on the board. Individually, the students copied the questions, wrote out the answers, and added five additional sentences with the use of added vocabulary, also written on the board. As time went on the students became more adept and were able to do ten questions and answers--writing more sentences from the scrambled vocabulary words.

In May the students were introduced to dictation. The teacher would dictate a paragraph while the students wrote. If a student did not know a word, it would be written, temporarily, on the board. As the students became more adept at spelling the teacher would no longer write the easiest words like "esta" or "con." Gradually the students would depend less on the teacher's help and learn their own spelling.

A certain spontaneity was noticed in a few second language students that exceeded the daily lessons. It was this spontaneous speech that was later considered by the

teachers as the next level of development after listening, speaking, reading, and writing. It was difficult to understand what made the students want to draw from their own backgrounds and put together new statements. Whenever it occurred, the students were encouraged by the teachers.

It was considered that oral practice with peers in the second language might stimulate this process. The teachers then began to think of situations within the classroom that could be set up to provide for the use of the second language. In the first grade, pictures and charts were brought to the small groups, and in an unstructured manner the children were encouraged to say something about the pictures such as the name of an object, the colors, or the number of times it was present. A store was also set up in one of the classrooms where only the second language was spoken. A native speaker was made the storekeeper and was instructed only to use his native language. When the second language students came to the store they could use a beginning dialogue they had learned or make up something on their own.

Another such situation found in a classroom was a restaurant where the menu was written in the second language and where the waiter or waitress could speak only in the second language. The learners would come to this area and use a beginning dialogue or make up a conversation to use with the waiter or waitress. At a more advanced grade these unstructured situations were carried over into the social

studies areas by presenting pictures or charts in the second language period that concerned a subject learned in the native language period. The learners were then requested to make up a phrase or sentence about the picture. The students found themselves encouraged and motivated by their own success and were very enthusiastic about participating in these activities.

Grade Level Goals

Readiness--kindergarten. Extensive listening activities in the second language were stressed. The adoption of a new sound system required the use of many listening activities. Exposure to the new sound system was made through listening to stories, songs, and finger plays by the teacher or through the use of mechanical equipment. Methods for much of the structured language lesson involved the listening to clear pronunciation models by the teacher and the instructional aide. Some of this exposure to the second language was acquired outside the structured language period. Mixed group activities such as physical education, art, and music lent themselves to the use of the second language. Languages were alternated by day or week, but not within the same lesson. Since these mixed group activities involved a whole group response, learning would take place through visual as well as aural clues and through the imitation of the other children. By grouping the children in pairs, one English speaking child with one Spanish speaking child, one child

could help the other child if he did not understand how to progress through the activity. The mixed group activities often lent themselves to reinforcement of structured language objectives in a nonstructured situation when the teacher recalled previously learned words or structures.

Speaking the second language followed listening. As the child's listening ability became more refined, his ability to repeat clearly and accurately also improved. Therefore, it was very important that the person who served as the language model be accurate and native in pronunciation. Using a pattern of directional gestures such as those found in the Oral Language Program by Southwest Regional Laboratories, the teacher was able to maintain the use of the second language throughout the lesson, and not resort to the use of the child's native language. It was considered by the teachers that the extensive use of the second language during the lesson would promote more rapid acquisition without confusion. The vocabulary was structured and limited and always presented in relation to the actual object (i.e., paper, pencil, apple) or the pantomimed action it represented.

Level I--first grade. The development of the second language continued with the listening and speaking skills at Level I. This development proceeded to review and expand the readiness program with added vocabulary and situations for spontaneous speech. Development of the second language

in the field of cognitive development was begun here. On a limited basis, certain science and math lessons were added to the second language program. Using concepts already familiar to the child in his native language, the second language lessons were not repeated as translations. The concepts were reinforced by a different activity. The activities promoted the child's thinking as well as verbalization in the second language. Exclusive use of the second language was imperative during these lessons.

Level II--second grade. Level II involved the continual refinement and enlargement of the audio-lingual program from readiness and Level I. The sentence structures and the vocabulary became more complex but continued to be sequenced and reinforcing of past structures. Exclusive use of the second language continued to be important. Spontaneous verbalizations continued to be encouraged. The areas for vocabulary expansion included parts of the body, clothing, home furniture, and food.

The concept and cognitive development continued developing by incorporating one weekly unit a month in the science or math curriculum. The language of the lessons was alternated by day using the preview-review method (see Concept Development Strand). Basic introduction to each concept was done in the native language. Reinforcement lessons with different activities were done in the second language. A language lesson was taught to emphasize

vocabulary in the concept area as well.

Introduction to second language reading was begun in the second half of this grade level. Reading is based on the oral development of the learner. A highly structured reading program entwined with an oral program has been developed to insure comprehension and success.

Any writing done at this level was done with individual words the student had already learned to understand, say, and read.

Level III--third grade. Continued maintenance and expansion of the audio-lingual program was considered necessary to broaden the oral base and vocabulary of the second language learner. More spontaneous language experiences were important at this level.

The second language concept areas were increased to one week of math and one week of science per month.

Reading was developed so as to use the state adopted reading series for the English as a second language students and the reading series developed by the Curriculum Development Center in Dade County, Florida, for the Spanish as a second language students. Comprehension was stressed more heavily.

Written language was encouraged by a variety of activities. Language experience stories became a means of expressing spontaneity. The emphasis was on communication, and not accuracy.

Sample Lessons

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Kindergarten

Subject: Speaking

Title: Spanish As a Second Language

MATERIAL

A balloon
A button
A marble
A crayon

OBJECTIVES

The English speaking kindergarten students will be able to ask: "¿Qué es?" and answer "Es un/una _____."

PROCEDURE

1. Placing a balloon in front of you, say: "Un globo."
2. Repeat using the marble, the button, and the crayon.
3. Model and have the pupils echo. "Es un globo."
4. Repeat step 3 substituting the marble, the button, and the crayon.
5. Hold up a button and ask: "¿Qué es?"
6. Pupils answer in a group: "Es un botón."
7. Continue this activity, alternating the objects and the pictures so that each type of question is answered by several pupils.

Figure 11

Spanish As a Second Language,
Speaking--Kindergarten
Level

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: First

Subject: Speaking

Title: Spanish As a Second Language

MATERIAL

Puppets	Apples
Crayons	Oranges
Balls	Boxes
Pencils	Books

OBJECTIVES

The English speaking first grade students will be able to ask: "¿Qué quieres?" and answer: "Yo quiero un/una _____."

PROCEDURE

Vocabulary should already be familiar to children. In previous lessons children have been taught to say "Yo quiero un/una _____."
Teacher models with puppets.
  Puppet Pepe asks: "¿Qué quieres?"
  Puppet Rosa answers: "Yo quiero un/una _____."
  Repeat.
Teacher models
  "¿Qué quieres?"
  Children repeat.
Initiate a chain dialogue.

Figure 12

Spanish As a Second Language,
Speaking--Level I

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Second

Subject: Speaking

Title: Spanish As a Second Language

MATERIAL

Puppet Joe
Picture of a school, playground, and a home.
Separate pictures of a boy and girl playing.

OBJECTIVES

The English speaking second grade students will be able to ask: "¿Dónde juega María?" and answer: "El/Ella juega en la escuela, casa o patio."

PROCEDURE

1. Place the pictures of a school, a home, and a playground some distance apart on the chalk rail.
2. Give a student a picture of a girl playing at school and have Steve stand by the picture of the school.
3. Put on Puppet Joe.
4. Stand near Steve and ask Puppet Joe: "¿Dónde juega María?"
5. Puppet Joe looks at the picture of the school and the picture María is holding and answers: "El juega en la escuela."
6. Have the pupils echo and answer: "El juega en la escuela."
7. Repeat steps 1-6 with two other students substituting "casa" and "patio" for "escuela."
8. Call another pupil up front and have him stand by the picture of the home.
9. Ask another child: "¿Dónde juega Juan?"
10. The first student responds: "Juan juega en la casa."

Figure 13

Spanish As a Second Language,
Speaking--Level II

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Third

Subject: Speaking

Title: Spanish As a Second Language

MATERIALS

Pictures of the following: a glass of water and a cup of coffee.
Two puppets.

OBJECTIVES

The English speaking third grade students will be able to ask: "¿Quíeres agua? ¿Quíeres café?" and answer: "No gracias. Sí por favor."

PROCEDURE

1. Teacher asks one puppet: "¿Quíeres café?"
2. Puppet answers: "No gracias."
3. Model and have students echo: "No gracias."
4. Have puppet ask students: "¿Quíeres café?"
5. Signal the group to answer: "No gracias."
6. Ask students individually.
7. Initiate chain dialogue.
8. Teacher asks the other puppet: "¿Quíeres agua?"
9. Puppet answers: "Sí por favor."
10. Model and have pupils echo: "Sí por favor."
11. Have puppet ask students: "¿Quíeres agua?"
12. Repeat steps 5 and 6.

Figure 14

Spanish As a Second Language,
Speaking--Level III

Strategies for Second Language Learning

Team teaching. A team teaching situation was used as the best means of providing high quality models. Two teachers were used at each grade level, one monolingual English speaker and one native Spanish speaking bilingual teacher. Each teacher provided the best language model available, and each functioned as a monolingual. A team teaching situation provided multiple advantages for bilingual education. Both teachers represented equal authority figures, thus advancing equal status for both languages. Since each language was represented by a separate individual, the children would identify each language with a separate person which helped to eliminate language confusion.

Bilingual instructional aides. Each teacher had the assistance of one bilingual instructional aide during the second language period of instruction. During this period it was necessary to divide the students into small groups of no more than ten. Instructional aides improved the program by assisting with the presentation of learning activities. By taking part in small group instruction, the instructional aide improved the opportunity for immediate reinforcement, thus more effectively teaching the second language learner. With a system of rotation, short lessons, and the use of audio-visual equipment, the teacher and the aide were able to make the second language period very effective.

Pantomiming, role playing, and dramatizations. Pantomiming, role playing, and dramatizations were found to be valuable strategies in teaching a second language. By not using the native language and forcing the student to rely on all his senses to understand, the premise of minimal interference was promoted. The more the second language was used, the more compelled the students felt to understand through familiar words and gestures. Thus, it was felt that comprehension was built on experience and the need to communicate.

Activity oriented centers. Small areas were designed within each classroom where the students could go and take part in a second language activity. These activities were a scheduled part of each child's day in some classrooms or a free time activity in other classrooms. Some of these activities included games, pre-recorded stories, creative writing centers, art centers conducted in the second language by a volunteer, and cross-age tutors.

Storytelling. Daily storytelling allowed the learners to listen and experience a new sound system. It gave the students an opportunity to tune into the intonations that are unique to the second language. Picture books were used to convey meaning through visual context clues as well as listening for familiar words in such a way as to expand his experience with the second language.

Mechanical equipment. Tape recorders and Language Masters

were used in a variety of ways. The tape recorder provided opportunities to listen to his own voice and to distinguish for himself any disparities in pronunciation. The Language Master provided opportunities for listening and repetition of a word or structure for each card used. It was also adapted for question and answer practice.

Small group instruction. It was found necessary to use small groups of not more than ten students, preferably five or six for second language instruction. In a small group the teacher and students were in close proximity and there was greater opportunity for immediate reinforcement or necessary corrections. With small group, the lessons were completed in fifteen minutes or less and repeated so as to instruct all the students in a rotation system.

Teaching Techniques

The following techniques were adopted from the English Oral Language Program (Reeback, 1970) for the Spanish second language program. They were considered effective in the development of both second languages.

Modeling. To model is to make a sound that the learner will repeat exactly as in an echo. In each lesson, as the modeling of a new word or a structure was necessary, the learner was required to listen first and then echo. In modeling, the following points are important: (1) to precede the model with a signal such as the raising of the palm which

clues the learner to listen; (2) to model loudly, clearly, and in close proximity to the learner; (3) to maintain consistency in pronunciation; and (4) to use natural intonation patterns. (Reeback, 1970:15).

Evoking questions. The ability to ask questions is not automatic and does not correlate with the amount of second language a child knows. The learner needs a systematic training in asking and answering questions. Establishing cues for asking questions is necessary. The learner usually learned to answer the question before he was able to ask it of others.

The learner was taught to understand "Ask me" or "Pregúntame" using the following procedure:

1. The children were familiar with the answer before the question was introduced (i.e., "Yo tengo una naranja").

2. Using two puppets, a simple dialogue was modeled by the teacher, for example: "¿Qué tienes?" "Yo tengo una naranja."

3. Then one puppet asked one learner, "¿Qué tienes?"

4. The learner answered with the familiar statement, "Yo tengo una naranja." If he could not, the other puppet prompted him.

5. After the learner answered, the teacher pointed to self and said: "Pregúntame."

6. If the learner did not answer or said something

irrelevant, the question was modeled and repeated: "¿Qué tienes?"

7. As the question was said it was quickly answered by the teacher: "Yo tengo una naranja."

8. The process was then repeated when the learner was asked, "¿Qué tienes?"

9. If the learner was not able to ask the question, it was then modeled and the learner repeated so that he could be positively reinforced.

10. The process was then repeated with another student or in another lesson.

After the students understood that when the teacher said, "Pregúntame," they were to ask her the question of the structure they were then trained to ask each other. Using the same procedure as above, they were cued with "Pregúntale a Juan," or "Pregúntale a el/ella." It took a while for each child to produce the question and prompting with partial utterances was sometimes necessary. The question was always answered promptly before everyone forgot what was asked. (Reeback, 1970:16-17).

Reinforcement. When a child makes a correct or partially correct response, something should happen in consequence. This is called reinforcing the response. Positive reinforcement is one of the teacher's most important jobs during the second language lesson. When a response is positively reinforced the teacher has acknowledged the worth of the

child who made the response.

There are many forms of reinforcement: smiling, nodding, patting a child, shaking his hand, or praising him by saying "muy bien" or something similar. Other kinds of reinforcement include giving a child something, letting him give you something, or giving him a chance to be the teacher, wear a hat, etc. When a child responds and the teacher makes something good happen, he should know that it happened because of his actions. The only really effective time to reinforce a response is the instant it occurs. (Reeback, 1970:14).

Correction of errors. Pupils will make errors during the lessons, and how the teacher handles them can greatly affect the success of the learning. Often a response is only partially correct and the learner may need more than one opportunity to correct his error. Work on only one problem at a time. When the pupil has made several errors, concentrate on the error that is the stated objective of that particular lesson.

If the learner is beginning his response incorrectly, the teacher can sometimes get him on the right track before he has had a chance to practice his mistake by quickly interjecting the right word. Blocking a response in this way can only be done when the pupils feel secure enough in the lesson situation.

Make no negative reactions to an error, but become

enthusiastic when the learner has corrected it. Provide "positive reinforcement" when the child improves his response. Always evoke a correct response from the learner in order to provide the opportunity for reinforcement. (Reeback, 1970:16).

Backward buildup. When a model is too long for a pupil to echo on the first try, break it into shorter, easier parts. A structure should be broken down by phrases rather than word by word so that the intonation pattern is not changed, for example: "Esta es una manzana." Let the student say "una manzana." Then let him try "es una manzana," and finally, "Esta es una manzana." (Reeback, 1970:15).

Time Periods in Second Language

Kindergarten. The kindergarten spent twenty minutes daily in second language instruction: the Spanish speakers in English as a second language classes and the English speakers in Spanish as a second language classes. The kindergarten spent additional time in a mixed group where the languages were alternated by day. These periods included opening exercises, sharing, physical education, and music. These activities amounted to fifty minutes of language exposure daily.

First grade. The first grade had scheduled thirty minutes a day for second language instruction. In addition to this,

forty-five minutes were spent in mixed groups where the languages were alternated by day. In this time the following activities were conducted: the Pledge of Allegiance, roll call, literature, and RRR--a period of reading readiness instruction emphasizing listening and observation. Occasionally a unit in science was conducted in alternating languages.

Second grade. The second grade spent sixty minutes in second language instruction which was divided into oral instruction and reading. An additional thirty minutes was spent in a mixed group daily where the languages were alternated by the day. This time was spent in opening exercises and physical education. Approximately one five-day unit, once a month, was conducted in specific science or math lessons, alternating the languages by day.

Third grade. The third grade spent seventy minutes daily in second language instruction which was divided into oral, reading, and writing instruction. An additional fifty minutes was spent daily in opening exercises, physical education, and music where the language of instruction was alternated by day. Science instruction was conducted in the mixed group. Two different units were taught each month. One unit was taught in Spanish, the other was taught in English. The preview-review method of instruction was used. Fifty percent of math instruction was also conducted in the mixed group. Languages were alternated by the week for two

weeks of the month. The other two weeks of math were conducted in the native language groups.

CONCEPT DEVELOPMENT STRAND

The Concept Development Strand involves the content areas of the curriculum such as science, math, and social studies as opposed to the language arts area. Conceptualization or concept development as described by Hilda Taba (1966:9)

> . . . involves certain psychological processes such as discriminating the elements or properties of objects or events. These discriminations can also be assessed on the basis of logical form, relevance, level of abstraction and appropriateness to the logical Gestalt of the task of producing or discovering a concept.

Piaget and Taba show a significant relationship between language development and thought processes, and as such a development of coordinate bilingualism must go beyond literacy and verbalization to include conceptualization in both languages. An interference of languages can produce an adverse effect on intellectual development, but a coordinate balance between languages is seen to increase the level of cognitive processes. (Jensen, 1962).

The bilingual program at Nestor School was implemented as a pilot program in 1969 in only four classrooms--two kindergarten and two first grade classrooms. Some of the basic aspects of the model had been thought out before the inception of the program, e.g., the team teaching approach with two cultural and linguistic models, and the

proportion of time to be spent in the native language versus the second language at these levels. Although the development of bilingualism and biculturalism was stated as long range goals, no definite plan was formulated as to how to achieve this, and from a wider community standpoint whether this was even desirable.

In assessing students' dominance, it was soon discovered that many Mexican-American students were of mixed dominance; that is, no clear distinction could be made between languages, and there existed severe linguistic interference. Up to this time many investigators in the field were describing these students as "bilingual." The staff began researching this problem. This research not only involved looking into the literature, but also comparing what was happening in other programs inside and outside the United States. As a result of this investigation it was realized that many students were developing a compounding of languages or "compound bilingualism" in mixed dominance to a severe degree and then progressively less until the native language is completely lost. The important factor, though, is that this type of interference of languages creates many learning problems. Even when the native language is almost totally lost and the student apparently speaks only English, the initial interference that was experienced in the early stage of language development set the stage for later retardation of English development. We are familiar with many statistics that support this fact in the case of the

Mexican-American student.

On the other hand, as a result of this investigation coordinate bilingualism was seen as an intellectual and learning asset. Also, in observing the greater bilingual education scene in the local community, the state, and the country, it became apparent that the development of coordinate bilingualism needed to become the goal of bilingual programs so that these programs were not reduced to mere remedial or acculturation processes. A coordinate level of bilingualism would require the maintenance of both languages throughout the curriculum and school experience, thereby giving the minority language the status needed to perpetuate its development not only for the Mexican-American student, but for the non-Mexican-American student as well. Only in this manner would the development of biculturalism be even remotely possible. The Cultural Awareness Strand describes the extension of this bicultural aspect of the model (see Cultural Awareness Section). Suffice it to say that without the basic acceptance of both languages and cultures on an equal basis, cultural awareness cannot even be developed.

The staff then began asking the questions: How is coordinate bilingualism developed? What patterns are conducive to its development? Environmentally, the team teaching approach with separate classrooms and two distinct linguistic models gave the students the opportunities to keep the languages distinct and separate. From then on all in-service training and observation by the coordinator

required that teachers never use languages interchangeably, particularly in lesson situations, again reiterating Eleanor Thonis (1971:466), "keeping languages growing in separate contexts so that coordinate systems may result." Keeping languages separated and equal was only one step in the development of balanced bilingualism. It was established that all reading and conceptual learning would begin first in the native language, and that the second language would be developed in proportion to the degree of progress in the first language. In contrast, to many programs attempting to implement a full bilingual - bicultural program, all areas of the curriculum were not dealt with equally in the beginning stages. Time spent in the native language would be about 80 percent to 20 percent second language at the beginning levels. Depending on the dominance of the student, a 50-50 balance is not achieved until later (see Chapter 3). This gradual integration of the second language proved to make the transfer from the native to the second language a smoother and a more successful process for the student. However, the development of literacy in two languages was only reaching part way up the ladder of coordinate bilingualism. Individuals who have achieved a high degree of proficiency in language have been educated in that language not solely as a language, but in all curriculum areas such as math, science, and social studies, so that thinking skills have developed via that language as well as the ability to use the terminology in all these areas. It

is precisely this ability to achieve separate thinking systems that develops a balanced, coordinate level of bilingualism.

The staff at Nestor School then began formulating a system whereby the content areas of the curriculum would also be gradually developed in both languages. During the first year of the program the kindergarten teacher began experimenting with second language lessons that reinforced the concept that had been presented in the native language group. These concepts would be in such areas as math, science, etc.

The next year Serafina Krear (then Assistant Professor at Sacramento State College, Department of Education) spoke to the staff at Nestor School. She presented a "preview-review" model for developing concepts in the second language, but allowed students to remain in mixed groups while not mixing languages (see Figure 15).

A further extension of the idea of developing thinking skills was to promote a climate for critical thinking. The staff began incorporating materials and approaches which were predominantly inquiry-based, e.g., the Xerox "Science, A Process Approach" was adopted for all grade levels. Also, several teachers attended a class on Taba Teaching Strategies for Developing Critical Thinking Skills. The instructor of this course happened to have been the coordinator of the program so that she was then able to integrate some of the basics of these strategies into the continuous in-service

ENGLISH

First Day or First Week

Preview of concept to be presented in native language (Spanish).	Mixed group lesson (Spanish and English speakers), entirely in English.*	Review of concept in form of English as a second language (ESL) lesson.

SPANISH

Second Day or Second Week

Preview of concept to be presented in native language (English).	Mixed group lesson (Spanish and English speakers), entirely in Spanish.	Review of concept in form of Spanish as a second language (SSL) lesson.

*When English is the medium of instruction for the mixed group lesson the English speakers do not receive a "preview" or a "review" of the lesson. The same applies to the Spanish speakers when Spanish is the medium of instruction for the mixed group.

Figure 15

Preview-Review Model

program (see In-Service and Staff Development section, Chapter 3).

The preceding section has been a description of the process that shaped the concept development strand. The following section will present a composite model that has evolved for this strand.

Strategies and approaches for achieving the concept development objectives are:

1. Team teaching with two separate classrooms and teachers to reflect distinct linguistic and cultural environments and models. This supports the concept of minimal language interference and the promotion of equal language status.

2. Lesson presentations in which the content areas of the curriculum as described above are initiated and continuously developed in the native language of the child. The major objectives of this strand, though, are to gradually and increasingly develop concepts in the second language from the beginning levels.

   a. At the readiness stage this would only involves reinforcement second language activities referring to concepts presented in the native language.

   b. At the first level the Preview-Review Model, as developed by Serafina Krear (1970), would be used on a limited basis throughout the year, for only some units of study, in the areas of math and science. These units would increase by the second level. In the

Preview-Review Model the languages are alternated by day or week and the children are placed in mixed groups. The concept is previewed in the native language, the lesson is in the language of the day for the mixed group, and then the concept is reviewed as a second language. The model is presented in graphic form.

c. The progressive objective is that by the third and fourth levels all of the science and math would be learned in a mixed group situation with the languages alternated by week, whereas in the beginning levels the alternation was by day.

d. The social studies area is still limited in the second language aspect by the intermediate levels. Some units are still introduced in the native language group and reinforced in the second language.

Preview-Review Model

Level 1

Limited units in science, using this model about twice monthly for a two- or three-day period.

Level 2

More units in science and math for periods of about a week.

Level 3

All science lessons.

Math: in the native language, on the second and third weeks of the month and in the second language, using the

model on the first and fourth week of the month.

Level 4

All science: model alternated by week.

All math: model alternated by week.

Social studies units bi-monthly: alternated by week or day, depending on student second language development.

Levels 5 and 6

All science: language alternated by week.

All math: language alternated by week.

All social studies: language alternated by week.

By the intermediate levels the "preview" is often not necessary for most students who have been in the program for several years.

Another strategy and approach for achieving the concept development objectives is the inquiry and process approach in which learning takes place inductively, and the learning of basic cognitive skills to deal with information rather than merely recalling it:

> The quantity and quality of the concepts and ideas an individual can use seem to depend on the quantity and quality of stimulation he has had, plus the amount of effort he has put into active thinking. In other words, the effectiveness with which an individual thinks depends largely on the kind of "thinking experiences" he has had. Unguided, these experiences may or may not result in productive models of thought. The task of instruction is to provide systematic training in thinking and to help students acquire cognitive skills that are necessary for thinking autonomously and productively. (Vetcher, 1975:1).

These approaches include the Taba Teaching Strategies for Developing Critical Thinking. These strategies include:

1. Concept development task, where concepts are formed, clarified, and extended as students respond to questions that require them to: (a) enumerate items related to an idea from data or experience, (b) find and identify a variety of basis for grouping items that are similar in some respect or related in some way, (c) label the groups according to the bases for grouping, and (d) subsume other items under those labels and to subsume labels under labels by relative inclusiveness.

2. Interpretation of data task. The behaviors involved in the interpretation of data task are: (a) get out specific data that have been studied or observed in story, a film, an experiment, or a research project; (b) ask students to look for cause/effect relationships among the data and to support their statements or inferences by giving evidence or explanations; (c) ask students to extend and support prior causes and/or subsequent effects of inferences they have made; and (d) ask students to arrive at conclusions and generalizations from the explanations they have given.

3. Application of generalization task which includes the following: (a) ask students to make a prediction, "What would happen if . . . ?"; (b) explain or support predictions and identify conditions that would be necessary to make the prediction plausible; (c) extend and recycle the preceding steps except by building upon one of the extended predictions; and (4) ask students to draw conclusions and

verify or modify the initial generalization.

4. Exploration of feelings task requires students to: (a) enumerate data from a story, a real or a fictional event, etc.; (b) make inferences about the feelings of the characters in the story, people in the event, etc.; (c) explain why the characters in the story or the people in the event might feel as they do; (d) relate experiences they have had in which either the circumstances or the feelings were similar; (e) describe how they felt; (f) explore reasons they felt as they did; and (g) students compare their feelings with the feelings of other people in a similar situation.

"Science, A Process Approach" (Xerox) is used at all levels for developing such skills as: (1) observing, (2) measuring, and (3) using numbers.

The above approaches lend themselves to a learning environment in which students are able to develop conceptualization skills in their second language as well as an environment in which mixed groups of students are independent enough to allow for language and cultural interaction.

The following sample objectives and activities will be presented not only to demonstrate the strategies described previously, but also to provide a guide for other teachers to develop lessons within a concept development strand. The objectives and activities will be given for each grouping and learning situation. For example, in the Preview-Review Model each aspect is noted. The preview, the lesson, and

the review will each have objectives and activities. Also, sample reinforcement activities for native language lessons will be shown. The lessons will reflect all levels, from the oral readiness stages through the literate stages.

(Lesson Plans begin on the following page.)

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Readiness

Subject: Reinforcement Lesson: SSL

Title: Parts of the Body

MATERIAL

Flannel figures of head, eyes, nose, and mouth
Flannel board

OBJECTIVES

The English speaking students will be able to orally ask the question "¿Qué es?" when pointing to the particular part of the body and orally respond, "Es un/una . . . cabeza, ojo, nariz, boca" three out of four times.

PROCEDURE

The students would have already had a lesson in the native language on Parts of the Body.

Spanish Second Language Reinforcement

1. Present flannel figures and say while presenting each one: "Es un/una cabeza, ojo, nariz, boca."
2. Students repeat each statement.
3. Teacher asks "¿Qué es?" while pointing to a figure.
4. Students respond "Es un/una cabeza, ojo, nariz, boca.
5. Individual students are chosen to be teacher and ask the question "¿Qué es?"

Follow-Up

A review of body parts--"cabeza," "ojos," "nariz," "boca"--using same structures.
Add new vocabulary: "orejas," "cejas," "pelo."

Figure 16

Spanish As a Second Language
Reinforcement Lesson

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Readiness

Subject: Reinforcement Lesson: SSL-ESL

Title: "Asking Santa"

MATERIAL

Santa Claus suit (hat, beard, red collar) made out of crepe paper.
Paper and crayons for drawing.

OBJECTIVES

The students will be able to say, in their second language, "Yo quiero _____ para Navidad," and "I want a/an _____ for Christmas."

PROCEDURE

1. Draw a picture of what the student requests for Christmas.
2. Resource student (a native speaker) will write the name of the object and model and how to ask Santa for it in the second language.
3. After being asked by Santa (a native speaker) what he wants for Christmas, the student is to respond according to the above objective.

Figure 17

Second Language Reinforcement Lesson

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level I

Subject: Native Language and Reinforcement Lesson

Title: Transportation Machines

MATERIALS

Chalk, paper, glue, magazines, and paint.

OBJECTIVES

The students will be able to give an example of a transportation machine and tell whether it is a land, sea, or air machine.

PROCEDURE

Native Language

1. Ask what transportation means. Have students give their ideas. Name or have a student name a transportation machine. Define the word.
2. Have students list as many transportation machines as possible. Write them on the board.
3. Ask students if they can think of ways the machines they have listed are alike and different, and whether they can group them.
4. Write machines in groups they suggest, asking the reason for the grouping.
5. Label groups.
6. Write a page in "Machine Book": "Esta máquina nos transporta en _____." Have children cut out of a magazine a transportation machine, paste it on their page, and complete the phrase.

Reinforcement Lesson: Second Language

The students will be able to orally indentify a transportation machine and classify it according to whether it functions on land, in the sea, or in the air by pasting it on a mural divided into air, land, and sea.

Figure 18

Concept Development Strategy: Native Language and Reinforcement Lesson

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level I

Subject: Science: A Process Approach

Title: Variations in Objects of the Same Size: Classifying

MATERIALS

Pictures of different kinds of birds
Pictures of different cats

OBJECTIVES

The students will be able to identify and name variations among the birds and cats. (The criterion is to name at least one variation for each.)

PROCEDURE

1. Discuss size, shape, color, and other descriptive features of birds and cats.
2. Ask: "Do all birds (cats) look alike?"
   "What things are different?"

Figure 19

Preview -- Spanish for Spanish Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level I

Subject: Science: A Process Approach

Title: Variations in Objects of the Same Size: Classifying

MATERIALS

Peanuts in shells

OBJECTIVES

The students will be able to identify and name variations among the peanuts. (The criterion is to name at least one variation.)

PROCEDURE

1. Give each child a few peanuts. Ask: "Are they all peanuts?" (Yes) "Are they all the same?" (No)
2. Discuss ways in which peanuts differ from one another. Call these differences "variations." Variations may include size, width, length, shape, smoothness, shades of color, and number of nuts in the shell.
3. Tell children to make groups of their peanuts. Then let them tell what variation made them put particular peanuts in the group.

Figure 20

Lesson in English--Mixed Group

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level I

Subject: Science: A Process Approach

Title: Variations in Objects of the Same Size: Classifying

MATERIALS

Crayons of different sizes and colors
Two puppets

OBJECTIVES

The students will be able to ask: "What is the same?" and respond: "They are all red," (blue, yellow, etc.) "They are all big," and "They are all little."

PROCEDURE

1. One puppet makes a group of large and small yellow crayons and asks: "What is the same?" The other puppet responds: "They are all yellow."
2. Repeat, making a group of vari-colored large crayons. Puppet asks: "What is the same?" The other puppet responds: "They are all big."
3. Students continue dialogue. Some students will make groups. Others will answer the questions. Vary groups as to size and color.

Figure 21

Review -- English for Spanish Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level I

Subject: Science: A Process Approach

Title: Variations in Objects of the Same Size: Classifying

MATERIALS

Potatoes

OBJECTIVES

Following a discussion the students will be able to identify and state differences between the potatoes and characteristics common to all potatoes.

PROCEDURE

1. Put all potatoes on the demonstration table.
2. Ask: "How do these potatoes differ from one another? and "What is the same about all these potatoes?"
3. Vary questioning to elicit concept of likeness and differences.

Figure 22

Preview--English for English Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level I

Subject: Science: A Process Approach

Title: Variations in Objects of the Same Size: Classifying

MATERIALS

Eight or more different spherical objects

OBJECTIVES

The students will be able to identify and name at least one variation among the objects and to name at least one similarity.

PROCEDURE

1. Place all spheres on the demonstration table.
2. Ask students: "What is a sphere?" Explain for those who did not know: "Are these all spheres?" "How do these spheres differ from one another?" and "How are they the same?"
3. Vary questioning.

Figure 23

Lesson in Spanish--Mixed Group

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level I

Subject: Science: A Process Approach

Title: Variations in Objects of the Same Size: Classifying

MATERIALS

Pictures of two birds, two pencils, two papers, two balls, two erasers; some should be the same and some different.
A puppet

OBJECTIVES

The students will be able to answer orally one of the following questions:
"¿Son iguales?" . . . "Sí son iguales." "No son iguales."
"¿Son diferentes?" . . . "Sí son diferentes." "No son diferentes."

PROCEDURE

1. Present vocabulary:
   Show two of the same pictures, "Estas son iguales."
   Show two different pictures, "Estas son diferentes."
2. Model with the puppet:
   Teacher: "¿Pepe, estas son iguales?"
   Pupil: "Sí son iguales."
   Teacher: "¿Estas son diferentes?"
   Pupil: "Sí son diferentes." or "No son diferentes, son iguales."
3. Ask individual students.

Figure 24

Review--Spanish for English Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level II

Subject: Math

Title: Comparing Volume--Measuring

MATERIAL

Plastic shapes: cylinder, cone, cube, pyramid
Sand
One ounce container
Eight ounce container

OBJECTIVES

The student will be able to compare volumes of the interiors of two figures where the volume of one is eight times the volume of the other and will be able to orally identify cylinder, cone, pyramid, and cube in Spanish.

PROCEDURE

1. Set up geometric shapes, and ask if anyone knows their names. Review names of shapes until children are familiar with them.
2. Introduce containers--ask which one is smaller and which one is larger.
3. Ask children to estimate how many of the small containers will fit in the larger one.
4. Using the sand, measure out the number of times the smaller container will fill the larger.
5. When asked how big the container is, a volunteer will be able to use the smaller container to determine the number of times the volume of the smaller container will go into the larger container.
6. Children will be able to name geometric shapes.

Figure 25

Preview -- Spanish for Spanish Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level II

Subject: Math

Title: Comparing Volume--Measuring

MATERIAL

Plastic shapes: two cubes, two pyramids, two cylinders, and two cones (cube and pyramid should be equal in height. Base cylinder and cone should be equal in height.)
Sand or salt, enough to use as a volume measurement

OBJECTIVES

The student will be able to compare the volumes of the interiors of two figures in which the volume of one is exactly three times the volume of the other.

PROCEDURE

1. Set up two stations in the room where pairs of children can work with a plastic box and pyramid container.
2. Tell each group that they must find out which of these two containers will hold more, and how much more.
3. Give no other direction unless they have some difficulty. In that case suggest that a member of the group pour sand into the box.
4. When all the children have done this ask the following questions: "Is the volume of the box larger than the volume of the interior of the pyramid?" "How much larger?" "Is one volume twice as large as the other?" "Three times as large as the other?" "Which container is three times as large as the other?"
5. Repeat activity with cone and cylinder. Discuss finding.
6. Pass out paper to each child and ask: "How many times do we need to fill the cone in order to fill the cylinder?" "Which of these two containers has the larger volume?" "How much larger is the cylinder than the cone?"

Figure 26

Lesson in English--Mixed Group

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level II

Subject: Math

Title: Comparing Volume--Measuring

MATERIAL

Hollow cone, cylinder, pyramid, and cube
Colored water

OBJECTIVES

Given the above items, the students will be able to identify those items in English and tell that this particular cube has a volume three times as great as the pyramid and this particular cylinder has a volume three times the volume of the cone.

PROCEDURE

Say: "This is a cylinder." Students: "This is a cylinder."
"This is a cone." "This is a cone."
"This is a pyramid." "This is a pyramid."
Ask: "What is this?" They reply with the appropriate name (i.e., "It is a pyramid.").
Ask: "Is this a . . . ?" They give the appropriate response. "Yes, it's a _____." "No, it isn't. It's a _____." "Is the cone three times as large as the cylinder?" "Yes, it is." "Is the pyramid three times as large as the cube?" "Yes, it is." "Is the cylinder three times as large as the cone?" "No, it isn't." etc.

Figure 27

Review--English for Spanish Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level II

Subject: Math

Title: Comparing Volume--Measuring

MATERIAL

One liter jar and identical containers to hold enough water to fill jar.
One jar slightly but not obviously smaller than the liter jar.

OBJECTIVES

The students will be able to demonstrate a procedure for comparing the volumes of containers in terms of unit volumes required to fill each container.

PROCEDURE

1. Put a liter jar on the table and enough small, identical containers to hold enough water to fill the jar.
2. Ask the children how they can compare the volumes of the jar and the containers. Get as many answers from them as possible.
3. Ask: "How do the volumes of the identical containers compare?" (Each identical container will hold the same amount of water. Demonstrate this by pouring water into one or more of the others.)
4. Remind them how they used a unit of length (any stick) before for measuring a table top. Ask: "Could you use one of these (identical) containers as a unit of measure of volume?"
5. Use one of the identical containers, fill the large jar with water, and tell the class to count the number of cans of water needed to fill the jar.
6. As you fill the jar, emphasize that the unit of volume you are using is the volume of one of the identical containers.

Figure 28

Lesson in Spanish--Mixed Group

Figure 28 (continued)

7. Record on the chalkboard the number of times the can had to be filled in order to fill the jar.
8. Ask the pupils how many cans would be filled if the large jar full of water were emptied into the small identical containers. To check their answers, pour the water into the cans. Record on chalkboard. "How does this result check with the previous method of filling the jar by using one of the identical containers?" (THE NUMBER OF CANS IS THE SAME IN EACH CASE.) Ask: "What is the volume of the jar?"
9. The children should state the result in terms of unit volumes.
10. Bring out another jar, slightly but not obviously smaller than the first. Have some of the children measure the volume of this jar in terms of the unit volumes. Ask: "What is the relationship between the volumes of the two jars? Which is larger? How much larger?"

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level II

Subject: Math--SSL

Title: Comparing Volume--Measuring

MATERIAL

One liter container
Container of colored water
One container; one/quarter or smaller part of larger

OBJECTIVES

The students will be able to ask: "¿Cuántos caben?" and answer "Caben _____" after having measured the larger container using the smaller as a unit volume.

PROCEDURE

1. Put the liter container and smaller container on the table.
2. Lift the smaller container. Fill with water. Say: "Este es uno."
3. Repeat and say: "Este es uno más."
4. Fill again and model: "¿Cuántos caben?"; students repeat.
5. Suggest number: "¿uno?" "¿tres?" "¿cuatro?"
6. Students will guess. Model: "Cabe uno." "Caben tres." Ask again: "¿Cuántos caben?" Repeat guesses.
7. Follow through and fill container.
8. Repeat question and answer.
9. Initiate a chain dialogue--students should ask each other and answer how many of the smaller containers fill the larger one.

Figure 29

Review -- Spanish for English Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: 5 days--day 1

Grade Level: Level III

Subject: Reading-Social Studies

Title: Flamingo

MATERIAL

Text: "Diferentes Animales del Mundo"

OBJECTIVES

Given a story of the flamingo, the students will be able to read the story and the definitions at the end of the story. The students will also draw a picture and write a story about the picture.

PROCEDURE

1. Conduct an oral discussion about what students know about the flamingo.
2. Students read the story and the definitions.
3. Students draw a picture of the flamingo.
4. Students write a story about the picture.
5. Subsequent lessons include:
   a. Answering comprehension questions orally about the story.
   b. Answering questions on paper using complete sentences.
   c. Construct and paint a life-size flamingo.

Figure 30

Native Language Lesson

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: 2 days

Grade Level: Level III

Subject: Social Studies--SSL

Title: Flamingo

MATERIAL

Tagboard chart with five or six facts about the flamingo
Small groups of children

OBJECTIVES

Day 1: After reading the chart the students will be able to answer questions about the flamingo which the teacher asks in Spanish.
Day 2: The students will be able to ask and answer questions about the flamingo in complete sentences.

PROCEDURE

Day 1:
1. Read the chart in unison.
2. The teacher asks questions such as:
   Teacher: "¿El flamingo es un ave?"
   Pupil: "Sí, el flamingo es un ave."
   Teacher: "¿El flamingo come tacos?"
   Pupil: "No, el flamingo come almejas."
   Teacher: "¿De qué color es el flamingo?"
   Pupil: "El flamingo es de color blanco, rojo o rosa."

Day 2:
1. Read the chart in unison.
2. Have the students ask each other questions:
   Pupil 1: "¿Dónde vive el flamingo?"
   Pupil 2: "El flamingo vive en Africa."
   Pupil 1: "¿Qué come el flamingo?"
   Pupil 2: "El flamingo come almejas."

Figure 31

Reinforcement Lesson--Spanish for English Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level III

Subject: Social Studies--ESL

Title: History of Mexico

MATERIAL

Photographs, paper, pencils, illustrations

OBJECTIVES

Given information on early Indian tribes of Mexico, the advanced English second language students will be able to discuss and write on the subject. The beginning students will be able to construct single sentences on the subject.

PROCEDURE

1. Two groups: advanced and beginning English second language students.
2. The teacher introduces the five Indian tribes or cultures using the bulletin board display.
3. The word culture is discussed with the advanced students and the story of how the Aztecs founded Tenochtitlán.
4. Beginning students will construct, with the aid of the teacher, simple sentences about each tribe, e.g., "The Olmecas lived near the sea."
5. Advanced students will draw a picture and write about the story of how and why Tenochtitlán was founded.
6. Begin discussion of Aztecs.

Figure 32

Reinforcement Lesson--English for
Spanish Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level III

Subject: Science: A Process Approach

Title: Telling Time

MATERIAL

A demonstration clock

OBJECTIVES

Shown various times on the demonstration clock, the students will be able to tell the five-minute intervals.

PROCEDURE

1. Show nine o'clock on the demonstration clock.
2. Have students count the minutes from one to five and then count by fives.
3. Have students observe that the six on the clock is thirty minutes.
4. Have students observe that the twelve on the clock is the hour position or zero position.

Figure 33

Preview -- English for English Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level III

Subject: Science: A Process Approach

Title: Telling Time

MATERIAL

Clock bingo cards
Demonstration clock
Covers for bingo

OBJECTIVES

Given clock bingo cards, the students will demonstrate their ability to tell time by covering the correct time in answer to such questions as "What time does school start?" etc.

PROCEDURE

1. Pass out clock bingo cards and tabs.
2. Begin game by asking familiar questions such as: "What time is lunch?" or "What time is recess?"
3. Ask students thought questions such as: "What time will it be thirty minutes after recess begins?"

Figure 34

Lesson in Spanish--Mixed Group

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level III

Subject: Science: A Process Approach

Title: Telling Time--SSL

MATERIAL

Demonstration clock
Small groups of students

OBJECTIVES

Showing the time on the clock, the students will be able to orally tell the time and ask what time it is.

PROCEDURE

1. Show various times on the clock and ask: "¿Que hora es?" Students answer: "Son las _____."
2. Individual students may take turns being teacher and asking the question.

Figure 35

Review -- Spanish for English Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level IV

Subject: Science: A Process Approach

Title: Classifying

MATERIAL

Living things: plants, mealworms, rats
Nonliving things: shells, rocks, cotton, plastic

OBJECTIVES

Given the above materials, the students will be able to orally classify the living and nonliving things.

PROCEDURE

1. Display materials.
2. Students enumerate items--teacher lists items on blackboard.
3. Teacher elicits the correct grouping from the students and then asks the students to label these groups.

Figure 36

Preview -- Spanish for Spanish Speakers

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level IV

Subject: Science: A Process Approach

Title: Classifying

MATERIAL

An aquarium, materials, and fish
Knute, turtle
Butcher paper
Colored ink-flow pens

OBJECTIVES

Given an aquarium with related materials and living organisms, the students will be able to categorize and sub-categorize the contents of the aquarium. They will also show likenesses and differences between the organisms.

PROCEDURE

1. With aquarium visible, ask students to describe its contents.
2. Using butcher paper and pens, record responses.
3. Have students categorize and subsume items--label groups.
4. Ask students how the fish and turtle are alike and different.
5. Ask: "How is the knute like the turtle?"
   "How is it like a toad?"
   "How is it different from a snail?"

Figure 37

Concept Development and Interpretation
of Data Lesson in English--
Mixed Group

NESTOR BILINGUAL PROGRAM
LESSON PLAN

Duration of Unit: _____

Grade Level: Level IV

Subject: Science: A Process Approach

Title: Classifying--ESL

MATERIAL

An aquarium

OBJECTIVES

Given an opportunity to observe the aquarium, the students will be able to describe the contents using known structures.

PROCEDURE

1. The students will observe the aquarium.
2. The teacher models:
   "What is _____?"
   "The fish is a living thing."
   "The fish is an animal."
   "The gravel is nonliving."
3. The students will repeat models.
4. A chain dialogue is initiated with students asking and answering each other.

Figure 38

Review -- English for Spanish Speakers

CULTURAL AWARENESS STRAND

The information here presents the interpretations and developments of certain decisions made in the evolution of the curriculum concerning cultural awareness. It focuses on a process description of the following:

1. Rationale of the strand.
2. Evolution of curriculum for the strand.
3. Objectives of the strand.
4. Strategies, which include: team teaching, open discussion circle, the inquiry approach, storytelling, language experience stories, and role-playing and dramatizations.
5. Sample lessons.

According to John Aragon of the University of New Mexico (1973, personal communication), "Culture is that which is common to a group of people and is manifested in their language, diet, costume, social relationships, values and beliefs." An equally important concern of the Nestor School program has been the development of bicultural as well as bilingual individuals. To be bicultural and bilingual is "knowing, feeling and acting as a member of both cultures. To be bicultural is to take elements of both cultures and reach a happy medium." (Jaramillo, 1972, personal communication). As Horatio Ulibarri (1969:5) defines it:

> Biculturism is a functional awareness and participation in two contracting sociocultures, which includes status, roles, and values. It is only when the philosophies, emotions, and aspirations

> of a socioculture are learned both at the conceptual and cathetic level that an individual submerges himself into another culture. Only then does he become a bicultural individual.

As was previously pointed out in the Review of the Literature, the exclusion of culture in the school curriculum is as damaging to the student as the exclusion of his native language. Since the prime objective of the Nestor program was the development of bicultural-bilingual individuals, the development of culture had to be included as an active and organized part of the curriculum if this objective was to be satisfied.

In the rationale for the Cultural Awareness Strand is the necessity of using a person's native culture and customs as well as his language to enhance a positive self-image. The best method of helping individuals acquire a positive self-image is to help them become aware of and understand their heritage and culture. Once an individual knows and understands his culture and has a good self-image, he is then ready and should be encouraged to learn about the culture of others. In this program the Cultural Awareness Strand dealt mainly with the Anglo dominant culture and the Mexican-American heritage and culture, since these were the two main cultures found in the community.

When the program first started each member of the staff taught the holidays as they happened throughout the school year. It was discovered that each grade level was teaching almost the same things. During the third year of

the program an effort was made to organize the cultural units of the curriculum. At a meeting of all the staff an agreement was reached as to what would be taught at each grade level. At that time an organization of the Cultural Awareness Strand curriculum was designed to include the teaching of culture through units of study in the social studies and health areas. By presenting organized units of study it was intended to achieve a status for each culture, and not just an informal tokenism such as singing and dancing. The study of culture was deemed extremely important to the program as a whole. A most basic premise of this strand is that by "exposure and participation in varied cultural activities, it is possible for individuals to become more open and tolerant of others." (Aragon, 1973, personal communication).

The following is a list of the important objectives incorporated into the Cultural Awareness Program:

1. A development of a positive attitude toward oneself.

2. The development of a positive and harmonious attitude in interaction with others.

3. The development of a positive self-image by identification with famous ethnic heroes through the study of these people.

3. To develop an awareness of the worth of people by relating them in history and comparing their equality.

5. To develop an awareness of the likenesses and

differences among cultures.

6. To explore people's feelings and attitudes of the world around them.

In the Cultural Awareness Strand, just as in the entire program, the team teaching approach was deemed especially useful. Each team partner provided the student with a cultural model. This allowed the student to identify with a person of his native culture and of the second culture. Students felt confident and positive about themselves when they knew that their behavior was understood by their teachers.

Even though the Cultural Awareness Strand involved specific units of study in the social studies area, it was interwoven throughout the entire curriculum and could not be extracted from the other strands, as the teaching of language or teaching by means of language is the teaching of culture. The cultural awareness units of study were taught in the native language first through Level II. At Level III some reinforcement lessons were carried out in the second language (see Concept Development Strand). These reinforcement lessons were not as detailed as those in the native language. They were geared to the student's ability in the second language.

The following strategies were used in the Cultural Awareness Strand, as they were considered effective and useful to the program:

1. The open discussion circle which is the means to

facilitate learning in the affective domain.

2. The inquiry approach to develop critical thinking and help students learn to be objective about their culture and that of others.

3. Firsthand experiences in observing and participation in activities of each culture.

4. Storytelling as used to enhance the student's knowledge of historical and cultural events.

5. Sharing individual and group research with peers.

6. Language experience stories in which a student draws from his own experiences and is allowed to construct the story in his own words.

7. Role-playing to help students become aware of the feelings, characteristics, and qualities of people in their own culture and that of others in different historical periods of time.

8. Cultural arts and crafts such as murals, weaving, and sculpture.

Participation in school programs such as singing and dancing or drama from both cultures was used to reinforce the units of study and also to involve and inform the community as a whole. Personal and make-believe experiences are explored in an effort to become aware of likenesses and differences in people.

Cross-age tutoring provided peer models in the native language and successful symbols for younger students. The tutoring helped the tutor gain a positive self-image, a

feeling of usefulness, pride in his native language, and a feeling of accomplishment.

Since cultural awareness is difficult to explain and define, sample units of each grade level follow. These cultural units have been written and taught successfully by the teachers in the Nestor bilingual-bicultural program.

Sample Lessons

The following series of figures represent Cultural Units of study used at each level. In Levels I and II the units are taught in the native language of the students. The same activity is done in both rooms at the same time. Several art activities are done in mixed groups. The mixed group is when half of the class is native Spanish speakers and the other half is native English speakers. The language used in the mixed group is Spanish in the bilingual teacher's room and English in the English speaking teacher's room.

In Level III the units are also taught in the native language of the students, but there are reinforcement lessons done in their second language. The art activities are done in the mixed group. The art activities are divided between the two teachers so that one week the students are with the bilingual teacher and the following week they are with the English speaking teacher.

The purpose of these units is to make the students aware of the different cultures which make up the world in which they live. A person is afraid of that which is unknown

to him; but if he knows what the other person is like and why he does things in a different way, there is no need for fear or distrust.

In conclusion, the investigator would like to say that the evaluation of cultural awareness is very difficult to achieve. In cultural activities one deals with attitudes and feelings, and it takes a long time to see the results or the impact they have on the students. One may even have to wait until the students are adults in order to see if they are really aware of other cultures and are better able to understand their fellow man. It is the hope and wishes of the authors of these units that the students would become more tolerant and understanding of others as a result of their exposure to these cultural units.

Activities	Concepts
Native Language	Level I
Day 1 Unit is introduced as a by-product of previous unit, "What Families Need." Discussion leads to needs of a Pueblo family with introduction and reading from The Indian and His Pueblo by Louis and Richard Floethe (pp. 1-6), which is used throughout this unit.	Children will realize Pueblo families' needs, be able to relate four events from book--depicting characteristics of Pueblo and his village. Children will see and relate likenesses and differences of how people live and the things they need to do so. Skills: listening, comprehension, naming likenesses and differences.
Day 2 See movies on making pots.	Become aware of procedure used in making clay pots--why pottery is needed. Skills: handwriting, listening, comprehension.
Day 3 Read pp. 8-11. Discuss. Write page for Pueblo book, "Indians Made Pots from Clay."	Use of hands in making clay. Able to relate important facts in formation of pots--use of earth for living. Skills. handwriting, listening, comprehension.

Figure 39

Cultural Unit--Pueblos

Figure 39 (continued)

Activities	Concepts
Day 4 Read pp. 5-7. Discuss. Write page for book, "Indians Made Bread from Corn."	Able to relate procedure of bread making. Compare with how we get bread. Skills: handwriting, listening, comprehension, discussion, deductive reasoning.
Day 5 Indian Dancing--use picture in book rhythm instruction.	Able to produce rhythmic Pueblo style dances using rhythm instruction. Children will talk about the importance of dancing to the Indians, i.e., for rain, the hunt, etc. Skills: discussion, rhythm, listening, motor coordination.
Day 6 Make Pueblo village--paper mache huts, clay, Indians, corn. Paint background (mixed group).	Children will decide and list important components of an Indian village, make these components, and assemble the village. Skills: recall, listing, coordination, observation, discussion.
Day 7 Read pages in book. Discuss. Write page for book, "Indian Men Met in the Kiva."	

Figure 39 (continued)

Activities	Concepts
Day 8 Make Pueblo pots out of modeling clay (mixed group).	The use of pots, the use of earth to make pots, an appreciation of the skill needed to make a pot. Skills: motor coordination, aesthetic.
Day 9 Read page 8 about weaving. Introduce weaving to children.	Materials used for weaving--wool from sheep. Skills of weaving. Skills: manual dexterity, eye-hand coordination.
Day 10 Read page 10. Discuss Indian sign language and symbols--use chart.	Symbols have been used for many years. There are many different kinds of symbols. Our alphabet and numbers are symbols. Skills: interpretation, abstract reasoning.
Day 11 Read page 11. Discuss ways of obtaining food. Write page for book, "Indians Killed Buffalo for Food."	The differences between killing animals for food and killing for no reason. The uses of the skins for clothes as well as the meat for food. Skills: discussion, listening, art.

Figure 39 (continued)

Activities	Concepts
Day 12 Paint pots (mixed group).	Beauty as well as function of pots. Skills: art, manual dexterity, aesthetics.
Day 13 Paint huts with paint mixed with sand (mixed group).	
Day 14 Make cover for Pueblo book--use colored chalk to make Indian signs.	
Day 15 Put village together (mixed group).	See Lay 6.
Other Interest Center Activities 1. Paper weaving 2. Yarn weaving 3. Pot addition (math) 4. Sentence (Indians dance for rain) 5. Sentence (Indians live in the desert 6. Shellac pots	

Activities	Concepts
Level I	
Native Language Duration: three weeks	
Days 1-3 Read and discuss "A Look Back" from The Social Sciences, a California state adopted social studies book (pp. 94-108).	1. People learn from the past. 2. Our lives are influenced by the way of life of our ancestors.
On the last day of discussion indicate to the children that they will begin a study of the Aztec Indians of Mexico and that the Aztecs are part of the ancestry of Mexican-Americans.	Given pictures of discussed cultural background, children will be able to identify likenesses and differences of the cultures. Children will be able to demonstrate an understanding of the "past" by drawing a picture and dictating a sentence telling about something in their past. Skills: handwriting, recall, comprehension, generalizing.
Day 4 Begin reading (or telling) story of Aztecs as told in The Indians of Mexico by Margaret C. Farqueher. Also needed is a map and a globe. Write page, "It is believed that early people walked across a bridge of ice."	Children will recall and orally discuss comparison of aspects of Pueblo culture and the Aztecs. They will be able to discuss at least one reason for the Aztec settlement of Lake Texcoco. Skills: handwriting, recall, comprehension.

Figure 40

Cultural Awareness--Aztecas

Figure 40 (continued)

Activities	Concepts
Day 5 Role playing of Indians finding eagle. Write page, "Quetzalcoatl means the Feathered Serpent."	Children will be able to role play the Aztec arrival at Lake Texcoco. Skills: oral language, interpretation, handwriting, recall, comprehension.
Day 6 Make valley of Mexico--paper mache (mixed group).	Materials: wheat paste, newspaper, tempra paints, chip board--base. Skills: manual dexterity, recall, ability to follow directions.
	Materials: paper bags, crayons, iron, and chart of Indian symbols. Skills: listening, following directions, drawing.
Day 7 Chinampas. Make clay Indians. The Aztecs planted their crops on chinampas--draw picture (mixed group).	Children will aid construction and assembling of the valley of Mexico through the following activities: paper mache, painting, constructing chinampas, clay Indian figures and temples. Materials: popsicle sticks, glue, clay. Skills: interpretation, manual dexterity, handwriting, recall.

Figure 40 (continued)

Activities	Concepts
Day 8 Filmstrip on Indians of Mexico. Construction of child-size walk-in pyramid.	Materials: 350 half gallon milk cartons covered with newspaper and painted brown, paste, glue. Skills: listening and comprehension.
Day 9 A book to begin on the Indians of Mexico. Discuss Cortez's arrival and Quetzalcoatl's influence. The Aztecs believed that Cortez was Quetzalcoatl returning. Draw a picture.	Skills: handwriting, recall, comprehension, inferencing.
Day 10 Same book. Discuss "La Noche Triste." Write sentence and draw a picture.	Skills: handwriting, recall, comprehension.
Day 11 Indian jewelry (mixed group).	Materials: silver, gold, and bronze macaroni; fishline; aluminum foil; tag (cut in geometric shapes for medallions); gold material. Each child will be able to string macaroni to make a necklace and paste a design onto aluminum colored cardboard to make a medallion.

Figure 40 (continued)

Activities	Concepts
Day 12 Masks (mixed group).	Children will be able to construct and decorate a mask. Materials: Construction paper 4-1/2" x 12", scissors, elastic thread, colored chalk.
Day 13 Dancing--interpretive Aztec dancing (mixed group).	Indian music record.

Activities	Concepts
Native Language	Level II
Day 1 Read Story of Columbus by D'Aulaire and discuss the meaning of discover, perseverance, and determination. To be able to relate orally four to six important events of Columbus and draw at least two conclusions about his life.	Overall concepts: the meaning of discovery, perseverance, and determination. Importance. Skills: listening, memory, thinking.
Day 2 Make a mural of Columbus' three ships including a class discussion about travel conditions.	To be able to draw at least two conclusions orally about travel conditions confronted by Columbus and his men and compare with today's traveling. Skills: perspective, foreground-background, observation, influence.
Day 3 Given a creative writing book with accompanying pictures, learner describes action taking place. Discuss his instruments, charts, maps, ships, and compare with today.	Compare Columbus' life style, navigation method, instruments, and charts with today's. Skills: handwriting, language development, observations.

Figure 41

Cultural Awareness--Columbus

Activities	Concepts
Native Language — Level II	
1. Flannel board story, calling attention to clothing, Indians, and hardships. 2. Discussion augmented by pictures to review hardships pilgrims faced on their trip across the ocean. a. Walk out space on playground to show area of Mayflower. 3. Discussion augmented by pictures of pilgrims' clothing and compare them with those of the students in the classroom. a. Ask about colors, fabrics. b. Where did they get their clothes? 4. With story review and pictures discuss orally hardships the pilgrims faced during their first winter in America. a. Discuss winter conditions in the area where they lived. b. Need for shelter--how they provided shelter for themselves. c. Need for food--how they provided food in the winter. 5. Showing passage of time with pictures of the seasons, discuss activities and encounters with the Indians; how they became friends.	Thanksgiving is a holiday--why do we have it? 1. Persecution--religious freedom. 2. Hardships they were willing to endure. 3. Comparing their lives with today: a. Clothing b. Traveling conditions c. Hardships d. Home environments e. Other people they encountered

Figure 42

Cultural Awareness--Pilgrims

Figure 42 (continued)

Activities	Concepts
6. Discuss "harvest." Put emphasis on pilgrims picking their crop, giving thanks to God for their harvest, survival, and religious freedom. 7. Mural depicting the plentiful harvest being shared by the pilgrims and their friends, the Indians (mixed group). 8. Distribute a book with pictures depicting the story of the pilgrims and spaces to write student's own version of the pilgrim story.	

Activities	Concepts
Native Language	Level II
	George Washington
1. Read story of George Washington by D'Aulaire, emphasizing youth and adult life. 2. Review story and then read entry on George Washington in the Heroes of the Americas book. 3. Color pictures of Washington as an adult and as a young boy. Discuss facts that children remember. 4. Review life of George Washington; the learner will then write his own version of Washington's life in the Heroes of the Americas book. 5. Read over stories in book; have children draw a favorite scene about George Washington.	After discussing reading and writing about Washington and Hidalgo, the students will be able to reflect the similarities and contrasts in the lives of these two men in an either oral or written form. For example: 1. That both men may be considered as the father of his country. 2. That both became famous for fighting for the independence of his country. 3. That Washington was the first president of the United States, while Hidalgo did not obtain that distinction. 4. That Washington was a professional soldier and Hidalgo was a priest in the Catholic Church.
	Miguel Hidalgo
1. Read Miguel Hidalgo y Costilla Padre de la Independencia de México by Lila Lopez, Whittier College Bilingual-Bicultural Education Program Title	

Figure 43

Cultural Awareness--Heroes of the Americas

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Figure 43 (continued)

Activities	Concepts
VII, 1971. Have the children read the story and discuss pictures. 2. Review story and have the children read the entry in the Heroes of the Americas book. 3. Make comparisons between Hidalgo's and Washington's lives. 4. Review life of Miguel Hidalgo; have children write their own versions of his life in their copies of Heroes of the Americas. 5. Read over stories in book; have children draw a favorite scene about the life of Miguel Hidalgo.	
Abraham Lincoln	
1. Read story of Abraham Lincoln by D'Aulaire. 2. Recall events in the life of Abraham Lincoln. Read section in Heroes of the Americas. 3. Give children an opportunity to write interesting facts about Abraham Lincoln's life as a child. 4. Recall events in the adult life of Abraham Lincoln. 5. Give the children an opportunity to complete the story of Abraham Lincoln in their Heroes of the Americas book.	After discussing reading and writing about Lincoln and Juarez, the student will be able to reflect the similarities and contrasts in the lives of these two men by an either written or oral form. For example: 1. Both men became presidents of their respective countries, in spite of their humble beginnings. 2. Both were poor and had to teach themselves to read and write. 3. Both represented an important

Figure 43 (continued)

Activities	Concepts
6. Read over story in book; have children draw a favorite scene about Abraham Lincoln to complete entries in the book.	unifying force in his respective country. 4. Both fought for the rights of the poor people.
Benito Juarez	
1. Read Benito Juarez el nino indio que llego a ser presidente by Lila Lopez, Whittier College Bilingual-Bicultural Education Program Title VII. Have the children read the story and discuss the pictures. 2. Read short entry in Heroes of the Americas about Benito Juarez. 3. Discuss and review story of Benito Juarez. Draw comparisons between Abraham Lincoln and Benito Juarez. 4. Children will write in their own version of the life of Benito Juarez, including facts of his youth as well as his adult life. 5. Read over stories in book; have children draw a favorite scene about Benito Juarez to complete entries in book.	

Activities	Concepts
Level III	
Native Language 1. Reading and listening for information. 2. Film strip viewing for information. 3. Report on some specific interest. Reports will be given by small groups of children on topics such as: a. General history (struggle with white man, famous chiefs, etc.). b. Family life. c. Contributions to the present (farming techniques, art, etc.). d. Warring techniques (use of bow and arrow, focal point). 4. Build an Indian village--groups assigned different tasks (mixed group).	To be aware of another way of life and to compare it with our own. Skills: improve reading, sharpen listening skills, and improve ability to extract meaningful information. Compare what happened to the American Indians with what happened to the Aztecs.

Figure 44

Cultural Awareness--American Indians

Activities	Concepts
Level III	
Native Language 1. Ask questions about the independence of Mexico. 2. Retell the story of the independence of Mexico. 3. Names of the heroes of the independence of Mexico. 4. Taba discussions (feelings and values) why they wanted their independence. 5. Read the story of the independence of Mexico. 6. Answer comprehension questions about the independence of Mexico. 7. Make Mexican flag (mixed group). 8. Murals showing some of the heroes of the independence, the fighting, and how Mexico looked at that time (mixed group). 9. Creative writing about the heroes, the peasant people, the invaders, and how the people felt.	1. Know the significance of independence. 2. Be aware of another way of life. 3. Compare the independence of the United States and Mexico. 4. Know why the Mexican people wanted their independence.

Figure 45

Cultural Awareness--Mexico

Figure 45 (continued)

Activities	Concepts
Cinco de Mayo	
1. Oral discussion about the battle of Cinco de Mayo. 2. Names of the heroes of this battle. 3. Taba discussions (feelings and values). 4. Retell the story of Cinco de Mayo. 5. Murals showing some of the heroes, the battle (mixed group). 6. Creative writing about Cinco de Mayo.	1. Know the significance of victory in this particular battle. 2. Be aware of how people feel when someone else wants to conquer them.
Revolución	
1. Oral discussion about the revolution. 2. Retell the story of the revolution. 3. Names of the heroes of the revolution. 4. Taba discussions (feelings and values). 5. Read the story of the revolution. 6. Answer comprehension questions about the revolution. 7. Murals (mixed group). 8. Creative writing stories.	1. Know the significance of revolution. 2. Know why the Mexican people wanted a change.

SUMMARY OF FINDINGS

The following section will provide a sample of evaluation data for the Nestor bilingual-bicultural program over the past three years. (This data was taken directly from the Final Evaluation Report Project Frontier, ESEA, Title VII, 1973.) This data includes results from levels Kindergarten through six. A discussion of the instruments cited in these results can be found in the evaluation section of Chapter 3.

The questions answered in the evaluation for the year 1972-73 are listed below, along with the major findings.

1. What is the effect of the maintenance of the native language (Spanish) on overall achievement in comparison to a control group which has not maintained their native language instruction?

The Cooperative Primary was analyzed to compare a third grade control group at Emory School, also in the South Bay Union School District. To provide a matching factor, entry scores of these third graders were compared at the first grade level on the Cooperative Primary Test (see Table 1).

Scores of Nestor School students at the third grade level indicate a gain greater than would be expected by change, 5 times out of 100 (analysis of covariance significant $< .05$).

Table 1

Average Grade Equivalents for
Spanish Speaking Students

Emory School			Nestor School		
Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 3
1.56	2.46	3.04	1.04	2.25	3.17

The Inter-American Series (IAS) Level II was also administered to experimental and control groups. The maximum score was 110 (see Table 2). Analysis of variance

Table 2

IAS Results

	Nestor School (Experimental)	Emory School (Control)
Average score	65.41	43.21

indicates a significant difference between the two groups.

These two tests confirm that when two groups of Spanish speaking students were compared, where one group has maintained their native language, the group with maintained native language scored significantly better on both English and Spanish standardized tests.

A second question was:

2. What has been the effect of the program on English speakers as compared to English speakers not in the

program?

To provide data regarding the bilingual ability of students, the Test of Bilingual Language Dominance was used. This instrument yields scores in two languages for three subtests (word meaning, word naming, word association) and a total test score for each language. These scores allow for relative comparisons of the "power" of each language. A ratio is also calculated which shows the dominance of one language to the second. The closer the ratio is to 1.0, the more equal are the student's abilities in both languages.

Table 3 describes performance on the Bilingual Test of Language Dominance by English speakers in the project, and a random sample of third grade English speaking students not in the project. For native English speakers in the program a total score English/Spanish ratio of 1.50 was obtained, as compared with an English/Spanish ratio of 6.54 obtained by English speaking children not in the program. This difference was significant as demonstrated by analysis of variance.

3. Are students participating in the program more bilingual than similar students not in the program?

The Bilingual Test of Language Dominance was used to determine how bilingual a student was. The third grade project students were divided into native English speaking and native Spanish speaking. Control groups for comparison were selected randomly from other third grade classes. The native Spanish speaking control group was selected from

Table 3

Bilingual Test of Language Dominance Results

	Project		Control	
	Native English (N = 7)	Native Spanish (N = 12)	Native English (N = 13)	Native Spanish (N = 9)
Word Meaning				
English	12.86	13.00	13.00	12.78
Spanish	12.29	13.00	8.77	12.44
Ratio	1.05	1.00	1.48	1.02
Word Naming				
English	29.71	27.58	31.54	22.00
Spanish	17.42	27.25	.08	18.10
Ratio	1.73	1.01	394.25	1.21
Word Association				
English	13.43	13.75	13.38	8.44
Spanish	7.57	16.16	0.00	10.22
Ratio	1.77	.85	--	.83
Total				
English	56.00	54.08	57.92	43.22
Spanish	37.28	56.41	8.85	40.76
Ratio	1.50	.98	6.54	1.06

Emory School, and the native English speakers were selected from non-project students at Nestor School. The preceding Table 3 compares the results. These data leave no doubt as to the success of the program. When native Spanish speakers from experimental and control groups are compared, one can see the project student has retained his Spanish dominance, while the control student has become English dominant. However, the project student is also closer to being statistically bilingual (ratio 1.0) than the control student. There is even greater gain between the English speaking classes where the control class has gained virtually no Spanish while the experimental project students are nearly bilingual.

One should also note that the "power" of the language must also be examined. While the "ratio" will give a comparison of English to Spanish, the raw score in each language is in itself a measure of fluency. It is noteworthy that the native English speaking experimental group, while increasing its Spanish, has retained equal competency to the control group in the native language (see Table 4).

In the 1973-74 Evaluation (Project Frontier, ESEA Title VII, 1974), the Test of Language Dominance was used to show the progress students were making in becoming bilingual throughout the project, as shown in Table 5. First graders were decidedly more dominant in their native languages. This difference had been totally reduced for native Spanish speakers, and at the end of the fifth grade the students were functioning as bilingual, as indicated by the ratio

Table 4

Bilingual Test of Language Dominance
Results--Project Students

	Kindergarten (N = 17)	Grade 1 (N = 22)	Grade 2 (N = 25)	Grade 3 (N = 25)
Word Meaning				
English[1]	12.58	12.95	12.92	12.92
Spanish[2]	10.59	11.00	11.84	12.40
Ratio[3]	1.19	1.18	1.09	1.04
Word Naming				
English	14.00	17.63	24.72	26.31
Spanish	10.35	13.86	20.28	23.84
Ratio	1.35	1.27	1.22	1.10
Word Association				
English	5.35	8.55	13.68	13.56
Spanish	4.11	5.90	10.96	12.28
Ratio	1.30	1.45	1.26	1.10
Total				
English	31.93	39.13	51.32	52.79
Spanish	25.05	30.76	43.08	48.52
Ratio	1.27	1.27	1.19	1.09

[1]English speaking responses.

[2]Spanish speaking responses.

[3]English speaking scores divided by Spanish speaking scores. The closer to 1.00 the ratio, the more truly bilingual is the child.

Chapter 5

SUMMARY

In a typical public elementary school located in a suburban-residential area which is composed of low to middle income families, a successful bilingual-bicultural program has evolved. This process was not due to chance occurrence, but resulted in large part by the creation of a balanced linguistic and ethnic environment. This environment was produced through parent consent and district bussing to include a balance between Spanish speaking Mexican-American students and English speaking non-Mexican-American students.

The twofold purpose of this study has been to document the process of the development of the bilingual-bicultural program at Nestor School. This process was seen as having two main aspects: the organization of an environment and the curriculum conducive to the development of coordinate bilingualism and biculturalism. The process of the organization included the following components: program environment, staff roles, physical setting and organization, parent education, community involvement, staff development and inservice, and evaluation. The curriculum aspect dealt with the process of development of four major curriculum strands: native language, second language, concept

Table 5

Test of Language Dominance Results

Grade Level	Native English Speakers				Native Spanish Speakers			
	Number of Students	Average English	Average Spanish	Ratio	Number of Students	Average English	Average Spanish	Ratio
Kindergarten	28	55.21	21.82	2.53	30	42.80	53.00	0.81
Grade 1	32	57.97	28.78	2.01	24	54.38	64.75	0.84
Grade 2	21	70.90	32.33	2.19	25	61.00	67.44	0.90
Grade 3	22	100.36	60.68	1.65	19	72.16	85.47	0.84
Grade 4	16	107.38	62.94	1.70	14	91.21	91.28	0.99
Grade 5	14	104.50	73.79	1.42	20	93.60	94.75	0.99

(.99). English speaking students had become more bilingual, reducing the ratio from 2.01 to 1.42.

Figure 46 indicates the increase in fluency in both languages for all students. Greatest gains have been made by English speaking students in English and Spanish. Note that the rank order of fluency remains constant. Entry levels for speakers in their native language are nearly equal.

Test of Oral English Production

The Test of Oral English Production was administered on a pre-post basis to native Spanish speaking students in grades kindergarten through two. The test provides scores in vocabulary, pronunciation, structure, and a total test scores; and it also reflects specifically the material taught in the Southwestern Cooperative Educational Laboratory (SWCEL) Oral Language Program. In addition to providing pre to post comparisons, the test is diagnostic in its reporting. This is accomplished by indicating level of proficiency on 26 specific oral language skills.

Maximum possible score is 24 points for vocabulary, 31 points for pronunciation, and 71 points for grammatical structure. It is generally recommended that a child who scores less than 130 points receive instruction in English as a second language. It has been determined that pupils who receive instruction in the SWCEL Oral Language Program will probably gain at least 30 points on the test during the

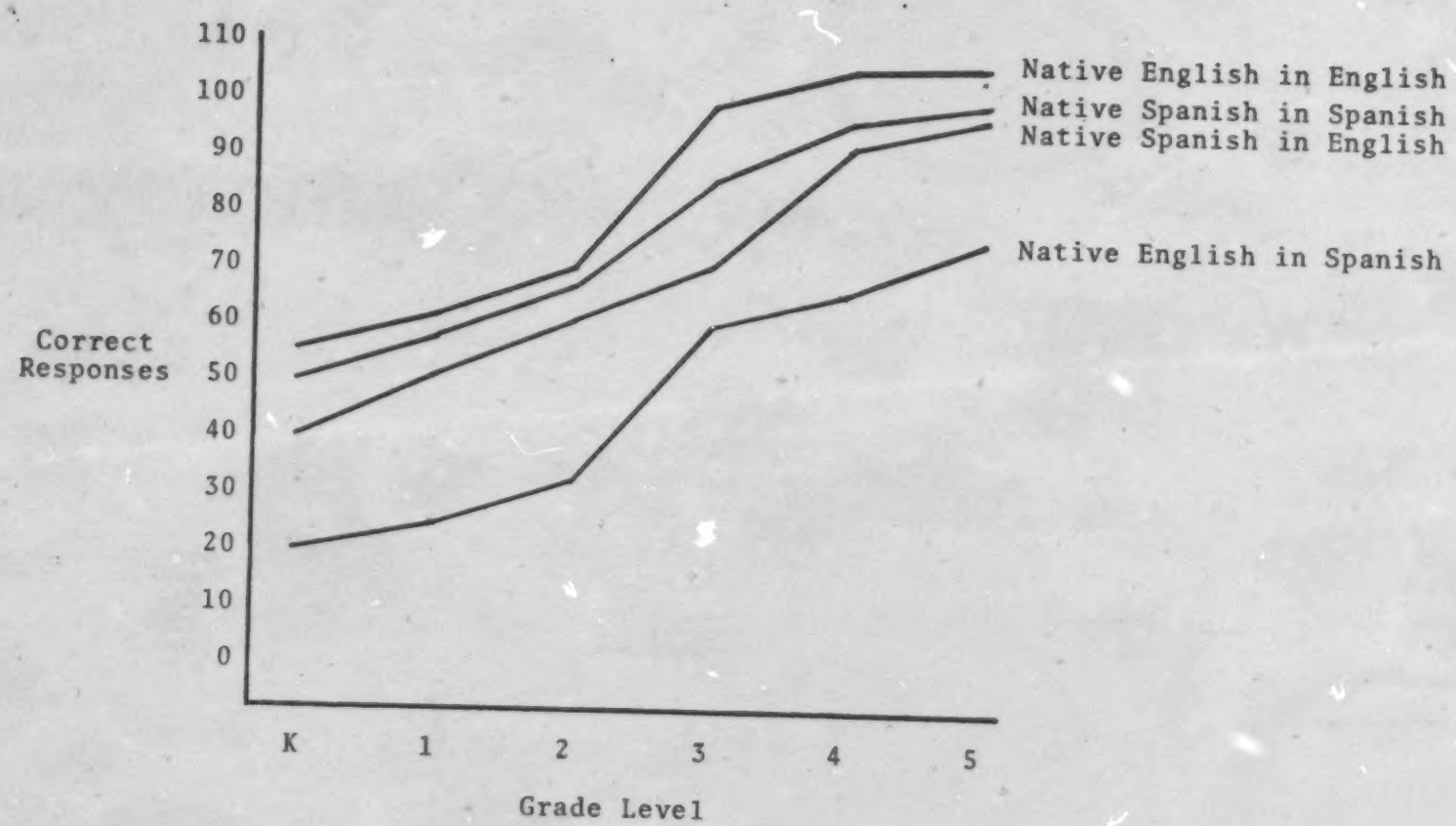

Figure 46

Test of Language Dominance Increase in Fluency

school year or receive a post-test score of 140. Table 6 indicates students' scores by grade and subtest.

Table 6

Test of Oral English Production
Mean Raw Scores

	Number	Vocabulary	Pronunciation	Structure	Total
Kindergarten					
Pre-test	16	11.4	18.8	37.9	68.1
Post-test	17	15.0	22.7	71.6	109.3
Grade 1					
Pre-test	17	16.2	22.4	57.7	96.3
Post-test	15	17.0	26.1	85.0	128.1
Grade 2					
Pre-test	10	18.6	24.0	65.6	108.2
Post-test	11	20.5	27.6	93.6	141.7

Average Gain Scores for Students Completing Both Pre- and Post-Tests

Kindergarten	Grade 1	Grade 2
44.8	32.8	23.8

The following additional data are taken from the Final Evaluation Report, Project Frontier ESEA Title VII, 1974-75.

Inter-American Series

The Inter-American Series (IAS) was administered to second, third, fourth, and sixth grade Spanish speaking students to assess their Spanish reading skills. Table 7 presents gain score averages from pre- to post-test.

Table 7

Gain Score Averages

Level	Number	Total Possible	Gain Score Average
Level I--grade 2	30	80	24
Level II--grade 3	28	110	16
Level III--designed for grades 3, 4, and 5	19	100	26
Level V--designed for grades 5, 6, and 7	19	125	15

Stanford Achievement Series

The Stanford Achievement Test (SAT) was administered to the following students to measure their English reading and math skills: English speakers pre and post grades two through six, post only grade one; and Spanish speakers pre and post grades two through six.

Spanish speaking students do not begin formal English

reading until oral English skills are developed and reading skills are mastered in the native language. Therefore these students do not usually begin reading in English, on the average, until about the beginning of second grade.

To present the data in a comparative manner, mean grade equivalents were used (see Tables 8 and 9). It should be noted that even though the Spanish speaking students do not begin formal English reading until grade two, the second grade students scored a mean grade equivalent of 2.5 on the SAT post-test. In looking at all of the grade levels it is clear that a consistent growth in English is being made by the Spanish speakers.

Criterion Referenced Spanish Reading Test

The project-developed Criterion Referenced Reading Test was administered to assess students' reading ability in Spanish. Native Spanish speaking students took the test at grades one through three. Native English speaking students took the test at grades three through five. Tables 10 and 11 show these results.

Behavioral Objectives

Behavioral objectives also provided much information on the progress of the children. Sample objectives are given below, as well as a tabulation of the 1974-75 results.

Upon completion of each year of instruction:

1. At least 80 percent of the Spanish speaking

Table 8

Mean Grade Equivalents--English Speakers

	Pre-test	Post-test
Grade 1		
Reading	--	1.5
Math	--	1.9
Grade 2		
Reading	2.2	3.4
Math	2.1	3.5
Grade 3		
Reading	3.6	4.3
Math	3.5	4.3
Grade 4		
Reading	4.4	4.5
Math	4.0	4.8
Grade 5		
Reading	5.1	7.1
Math	4.5	6.2
Grade 6		
Reading	6.2	7.5
Math	6.6	7.7

Table 9

Mean Grade Equivalents--Spanish Speakers

	Pre-test	Post-test
Grade 2		
Reading	1.3	2.5
Math	1.5	2.8
Grade 3		
Reading	1.9	2.4
Math	2.3	3.0
Grade 4		
Reading	2.5	3.5
Math	2.9	3.8
Grade 5		
Reading	4.7	6.0
Math	5.6	6.8

Table 10

Criterion Referenced Test--Spanish Speakers

Grade	Level	Points Possible	Average Correct		Average Correct	
			Pre	%	Post	%
1	I	50	3	5	44	88
2	II	46	32	70	41	89
3	III	61	45	74	51	84

Table 11

Criterion Referenced Test--
English Speakers

Grade	Level	Points Possible	Post-test Only	
			Average Correct	%
3	I	50	45	90
4	II	46	43	93
5	III	61	47	77

students will demonstrate listening comprehension in English as evidenced by successful completion of 80 percent or more of the listed activities appearing on a teacher administered checklist.

2. At least 80 percent of the Spanish speaking kindergarten students will demonstrate oral proficiency in English as evidenced by successful completion of 80 percent or more of the listed activities appearing on a teacher administered checklist.

3. At least 80 percent of the English speaking kindergarten students will demonstrate listening comprehension in English as evidenced by successful completion of 80 percent or more of the listed activities appearing on a teacher administered checklist.

4. At least 80 percent of the English speaking kindergarten students will demonstrate oral proficiency in English as evidenced by successful completion of 80 percent

or more of the listed activities appearing on a teacher administered checklist.

5. At least 80 percent of the English speaking kindergarten students will demonstrate reading skills in English as evidenced by successful completion of 80 percent or more of the listed activities appearing on a teacher administered checklist.

6. At least 80 percent of the English speaking kindergarten students will demonstrate writing skills in English as evidenced by successful completion of 80 percent or more of the listed activities appearing on a teacher administered checklist.

7. At least 80 percent of the Spanish speaking kindergarten students will demonstrate listening comprehension in Spanish as evidenced by successful completion of 80 percent or more of the listed activities appearing on a teacher administered checklist.

The objectives are summarized by grade in Table 12.

Table 12

Objectives Summarized by Grade

Grade	Number of Objectives	Number Passed	Number Failed	% Passed
Kindergarten	18	18	0	100.00
1	28	28	0	100.00
2	17	16	1	94.12
3	24	21	3	87.50
4	24	20	4	83.30
5	20	17	3	85.00
6	24	24	0	100.00
Total	155	144	11	92.90

development, and cultural awareness. Each of these strands was described as to its rationale, methodologies, and strategies for implementation of the strand objectives.

CONCLUSIONS

From the gradual development of the model and through the evaluation findings, the following conclusions were made.

1. A strong commitment to a maintenance philosophy of bilingual education being approached in a team teaching manner has been found to create the environmental status needed for the Spanish language to allow coordinate bilingualism to develop. Team teaching in this program has meant a bilingual Mexican-American model working with an English speaking non-Mexican-American model in two separate classrooms to provide a division of labor, separation of languages, and a strong identity for each language and culture.

2. The two separate language environments and models have encouraged students to use languages independently of each other, thus producing a higher degree of bilingualism. These environments have also provided a high degree of status and teacher expectations for the languages so that students are motivated to learn the minority language.

3. Strong native language development has been concluded as the key to second language acquisition. The native language must be developed in a listening, speaking, reading, and writing developmental sequencing and must have

a chance to develop without the interference of the second language. Therefore, a gradual and controlled introduction of the second language is necessary. It is concluded that such a gradual implementation of the second language is a viable methodology for a successful maintenance bilingual-bicultural program since it has helped native Spanish speakers to reach national norms in English language development as well as becoming literate in their native language. Children have also been observed to have developed positive self concepts and enhanced abilities and achievement in all areas of the curriculum.

4. It is also concluded that the "Anglo" students have become progressively more bilingual. However, they are not as yet coordinately bilingual in comparison to the Mexican-American students. We believe this to be more a function of the individual teaching quality and/or commitment to the overall model.

In considering this difference some comparisons of recent research on bilingual programs have been made. Christina Paulston (1974) gathers in her paper on language learning theory several studies such as that of Modiano that support mother tongue instruction in order to develop strong second language. Other studies such as the St. Lambert experiment in Canada, and replicated in Culver City, California, counter the above conclusion in that these students begin instruction totally immersed in the second language.

Paulston concludes by analyzing these studies (1974: 23):

> In every single study where monolingual children did as well or better in L2 (second language) instruction than did native speakers, those children came from upper or middle class homes. Those in support of initial mother tongue instruction deal with children from lower socio-economic levels.

This issue was debated as Dr. Andrew Cohen from the University of California at Los Angeles, who has worked with the Culver City immersion program, visited the Nestor program regularly over the last three years. In responding to solicited criticism, he claimed at the first two visits that the Culver City "Anglos" were much more advanced in Spanish than the Nestor "Anglos," and that possibly we should try some language immersion. The staff debated that the difference was due in part to the fact that many of the Nestor students, including the non-Mexican-Americans, are from lower socio-economic homes and needed initial development in the first language. In our conclusion on his last visit in 1975, we found that possibly the difference in achievement was also due to differences in approaches.

Dr. Cohen claimed that although the Culver City students were more spontaneous, the Nestor students had more grammatically correct usage. Many of the recent changes in the second language program at Nestor have included a balance between structured and spontaneous activities throughout the second language curriculum.

The inclusion of the Concept Development Strand initiated by the preview-review model has expanded second language teaching into the concept areas. This has been a major step in the development of thinking skills in both languages.

5. It is further concluded that a strong coordination is needed from a staff member free of classroom responsibilities to provide internal evaluation and guidance, to promote sequential development, and to prevent isolationism within the staff.

6. Staff development must be a concerted effort by all. It requires a commitment of extra time and effort from all participants for the development of new curriculum. Staff development should be interna--new teachers being trained by the experienced teachers. Provision must be made for the development of a congruent philosophy by careful selection of staff on ability and philosophy. Continual evaluation and inservicing to develop commitment to bilingual education not only for immediate staff but also for administration, school board members, and the community must be an ongoing concern.

7. Parent education is seen as a need from the inception of a bilingual-bicultural program. Minority community members need to be educated in political involvement, especially at the school board level. They need to be informed so as to take an active part as members of school boards, and/or representative voices of the community.

Parent education is especially necessary in the development of federally funded educational programs if there is to be an eventual funding commitment at the local level.

One-to-one contacts between teachers and parents have proved to be of the utmost importance. Home visits help to break down the barriers between the school and the community. Meetings planned around children's active participation stimulate greater participation from the parents. The development of an advisory group of parents for decision-making make a program more representative of the community.

8. Finally, it is concluded that although specific units and activities in culture need to be included in the curriculum, the attainment of cultural awareness evolves from the interaction of all the factors presented in this study, that is, environment, attitudes and expectations, and language status. Given a program that places the development of bilingualism and biliteracy in the context of the affective domain, biculturalism should be a natural evolution.

RECOMMENDATIONS

As bilingual/bicultural programs are developed throughout the United States, they seem to be taking a multitude of direction. Some programs are being initiated without first considering a philosophy or a set of long-term objectives. Others are immediately adopting a philosophy that has proved successful in another area, not

considering the suitability of their own locality. Since there is a great lack of research in the area of bilingual-bicultural education, it seems imperative that research be conducted considering the effectiveness and viability of bilingual-bicultural education programs.

The following are recommendations for further research:

1. Conduct a study investigating the type, i.e., coordinate versus compound bilingualism developed through instruction simultaneously in two languages as opposed to that instruction conducted separately.

2. Conduct a study which specifically links physical environment to bilingual development, possibly comparing a distinct environment approach versus a single environment self-contained situation.

3. Conduct a study comparing groups of English speaking non-Mexican-American students similar to those at Nestor School as to second language development. One group would receive mother tongue to second language instruction, and the second group would receive their instruction almost totally in the second language at the beginning stages.

4. Conduct a study on cultural attitudes as they develop when students are exposed equally to both cultural teaching models and their interactions as opposed to a single cultural model.

5. Conduct a longitudinal study of the Nestor School students or other students who have remained in a

bilingual program through grade six to determine the degree of retention of bilingualism as well as other areas such as academic achievement and/or bilingual attitudes.

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